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14. ABSTRACT The Family Cohort (FamCo) project's primary objective is to examine empirically the impact of deployment to OEF/OIF on the families of US service members. The study is being conducted in collaboration with the Millennium Cohort Study (MilCo), and will be implemented by adding a family member assessment component to MilCo's Panel 4. Panel 4 was launched during year 2 (7 June 2011), and expects to enroll about 62,000 new participants in MilCo. FamCo will select a probability sample of Panel 4 participants who report in their MilCo baseline assessment that they are married, and ask them to provide contact information—including e-mail address—for their spouse. The FamCo sample was selected to produce about 10,000 spouse participants, of which about half will be married to a service member who has been deployed to OEF/OIF at least once, and the other half will be married to a service member who has not (yet) been deployed to either of those conflicts. The baseline assessment for FamCo focuses on spouses' perceptions of: deployment stressors for family members; health and mental health status of family members; and quality of family interpersonal relationships. Additional relevant information (e.g., health and mental health service utilization, characteristics of sponsor's deployment) will be drawn from military records.					
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**NWHSS Implement  
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Assessment  
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Millennium Cohort  
Study**

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## 1. Introduction

The Family Cohort (FamCo) project's primary objective is to examine empirically the impact of deployment to OEF/OIF on the families of US service members. The study is being conducted by a multidisciplinary consortium of research organizations, including the Naval Health Research Center (NHRC), Abt Associates (Abt), Duke University (Duke), and New York University (NYU), as a new component of the Millennium Cohort Study (MilCo), beginning in MilCo's Panel 4.

MilCo's Panel 4 was launched near the end of year two of the FamCo project (7 June 2011), and is expected to enroll about 62,000 new participants in MilCo. FamCo was launched in July, 2011, and is selecting a probability sample of Panel 4 participants who report in their MilCo baseline assessment that they are married, and ask them to provide contact information—including e-mail address—for their spouse. The FamCo sampling plan was designed to produce about 10,000 spouse participants, of which about half will be married to a service member who has been deployed to OEF/OIF/OND at least once, and the other half will be married to a service member who has not (yet) been deployed to either of those conflicts.

The baseline assessment for FamCo focuses on spouses' perceptions of: deployment stressors for family members; health and mental health status of family members; and quality of family interpersonal relationships. Additional relevant information (e.g., health and mental health service utilization, characteristics of sponsor's deployment) will be drawn from military records.

## 2. Project Administration & Technical Implementation

### 2.1 Overview

The FamCo project was purposefully implemented as a collaborative effort of the MilCo team at NHRC and a consortium of investigators at Abt Associates, Duke University School of Medicine, and New York University School of Medicine. The project was described in a single application submitted by Abt, but funded via two separate funding streams--one for NHRC, focused on data collection, and another for Abt, Duke, and NYU, focused on data analysis and interpretation.

All of the tasks necessary to implement the study are being conducted collaboratively, but leadership varies across the tasks. Tasks that involve the logistics of the survey (e.g., sample selection, survey implementation, survey data management) are led by the MilCo team with input and support from FamCo, and tasks that include the substance of and constructs covered by the survey, and the analysis and interpretation of FamCo data, are led by the FamCo team, with input and support from MilCo. Communication between the teams has been facilitated by regularly scheduled conference calls of the two teams, in which we discuss progress and issues from the current work and plans for upcoming tasks.

### 2.2 Project Team & Work Modifications

#### Abt Team

As part of the Milco team, the Abt team--comprised of Principal Investigators and technical staff from Abt Associates, Duke University School of Medicine, and New York University School of Medicine - will lead the data analysis component of the Family Member Assessment study. This team, led by Drs. Schlenger (Abt), Fairbank (Duke), and Marmar (NYU), brings together broad technical expertise, including:

- Child development and child and adult behavioral health;
- Spousal and family psychosocial functioning;
- Survey research and methodology; and,
- Service member behavioral health, PTSD, and physical health.

These areas of expertise are critical to the FamCo team's ability to implement a robust analysis plan and central to understanding dynamic impact of military deployment on the psychological and physical wellbeing of families. The current version of the detailed analytic plan is included in the appendices of this document (see Appendix A). This document outlines the analysis strategy, the substantive areas of focus, and research questions to be addressed.

To further support of the study effort during the fourth year of work, the Abt team provided substantive methodological expertise and financial support to improve the implementation of

the family assessment survey and address issues with response rates. Through routine monitoring and financial support of the study, weekly team meetings, and other ongoing communications with the data collection team (NHRC), the Abt team provided:

- Timely responses and solutions to improving efforts to engage the survey target population (e.g., continued funding of Dr. Dillman to provide technical expertise to improve survey response rates, proposing and securing the services of Dr. Dillman);
- Strategies and access to resources to improve survey response rates;
- Updates, in collaboration with team member NHRC, to USAMRMC (e.g. scientific review panels, product line reviews) on the progress of the family assessment study; and,
- Provision of funding that supported the provision of incentives to survey respondents, provided three key staff members to the NHRC team, and supported the 2013 Scientific Review Panel in San Diego.

Included in the appendices are updates on survey implementation provided to USAMRMC at the April 10, 2013 Scientific Review Panels (see Appendix B).

### **Consultants**

To provide additional methodological support for the survey implementation, the Abt team secured the services of Drs. Don Dillman and Richard Kulka. Experts in the field of survey research and methodology, Drs. Dillman and Kulka were reviewed survey implementation procedures and provided recommendations to improve survey response rates. While Kulka's services were used intermittently (e.g, preparation for the 2012 Scientific Review Panel), Dillman's services were used throughout the project year (see "Technical Progress & Activities").

The FamCo team will continue to use Dillman throughout the fourth year of the project. During the fourth year his scope of work will include:

- Continue close monitoring of survey implementation procedures and response rates;
- Provide feedback to improve survey response and communication with the survey population; and,
- Attend key meetings with USAMRMC personnel to discuss survey updates and planning for data analysis.

### Scope of Work: Modifications

At the request of USAMRMC, the Abt team provided additional funding to support the data collection effort led by NHRC. The additional funding targeted improving response rates among Panel 4 survey participants, which prior to year three had not met the survey response goals for this project (see “Technical Progress & Activities”). After discussions with USAMRMC and NHRC in May 2012, resources from the Abt-Duke-NYU stream was reallocated to address the following:

- Enhancing communications with the Panel 4 service member sample to improve survey response;
- Increasing the sample size of eligible respondents;
- Adding additional technical staff to the NHRC team to assist with the timely completion of work associated with survey implementation (see Appendix C for Staff Descriptions); and,
- Providing NHRC with ongoing consultation with Dr. Don Dillman to improve survey implementation strategy and monitoring participant response to the family assessment survey.

Specifically, \$917,923 was reallocated to the data collection effort during year three, and an additional \$144,726 was reallocated for work in year four. At the time of this report, all requests have been met.

## 2.3 Technical Progress & Activities

### Implementation of the Spouse Survey in MilCo Panel 4

When the third year of the Family Study began, the MilCo Panel 4 and FamCo surveys had been launched (in June and July 2011, respectively), but early participation results were not encouraging in either. In response, the FamCo team had moved quickly to intervene as the second year was coming to a close, by bringing Drs. Don Dillman and Richard Kulka in as consultants.

Dillman continued his work on FamCo in year four, working with the NHRC team that is implementing the FamCo data collection to make changes that will improve spouse participation. The “new” design incorporates a wide variety of the elements that have been shown in the many randomized field trials that Dillman has conducted across his career to enhance survey participation, including more incentives, revising the messages in communication with potential participants, and the offer of a pencil-and-paper option for those who wanted it (the NHRC team had decided to eliminate the pencil and paper mode from the FamCo design, thinking that an all-internet survey would save time and resources, both of which turned out not to be the case).

Additionally, as the implementation of the “Dillmanization” of the FamCo survey protocol unfolded, Dr. Nancy Crum began a dialog with the Chair of the NHRC IRB concerning barriers to participation in FamCo. When the IRB reviewed the protocol prior to OMB clearance, it insisted that the FamCo study could only approach spouses of service members who approve of spouse participation and provide contact information. The a priori assumption of NHRC was that 65% of married Panel 4 participants would give permission to contact the spouse, and 50% of those spouses would participate in FamCo.

Early experience, however, suggested strongly that spouse referral and participation rates would be substantially lower than expected—four months into the data collection, service member referral of spouses was languishing at about 32%, and the participation of referred spouses at about 30%. Based on discussions with Dr. Crum, the NHRC IRB reconsidered, and decided to allow FamCo to approach spouses of Panel 4 participants regardless of service member referral. We expect that we will enroll a large number of spouses via this direct path—as this report is being written, we have enrolled 1,119 spouses via this mechanism who would have been ineligible.

The FamCo team held the annual meeting with the FamCo Scientific Review Panel (SRP) in April, 2013. Much of the discussion centered on response rate issues, and panel members provided many good suggestions for improving participation. We have scheduled a meeting with them in November to inform them of changes we made and the results in participation.

### **Conceptual Models That Will Guide the FamCo Analysis**

The FamCo team has developed conceptual models that operationalize our hypotheses about processes underlying the phenomena that we will be studying. As an example, Appendix B contains two slides showing the hypothesized associations among the variables that are included in the Spouse Survey.

Those models are useful in many ways, but are best understood as generic models of community epidemiologic studies focused on health and mental health outcomes. In our application, we described a conceptual model of how military families respond to war zone deployment of a service member parent, which will guide many of our substantive analyses. In what follows, we describe briefly some examples of other kinds of conceptual models that will structure our analyses of the FamCo baseline data, focusing on methodological issues.

(1) *Establishment of external validity.* Although the FamCo sample is a probability sample drawn from military records, the external validity (generalizability) of the study’s findings can be heavily influenced by response rate if the non-response is not random. We plan to use propensity models to examine and adjust for potential non-response bias. To do so, we will first fit logistic regression models of “propensity to participate” in the Spouse Survey, using predictors that are available for both those who did participate and those who did not (e.g.,

demographic and other variables available in military records. Then we will use the logistic model to create for each person in the sample a “predicted probability of participating in the Survey,” and compute the correlations of the predicted probability and the baseline values of the primary outcomes. For any outcome, if there is a statistically significant correlation with predicted probability of participating, there is non-response bias.

When bias is identified, it must be adjusted for. Fortunately, the bias can be adjusted for easily, by creating nonresponse weights for use in the analysis—for each person who participated in the study, their non-response adjustment weight is the inverse of their predicted probability of participating in the Survey.

The procedure described above produces a gold-standard correction for the non-response of spouses for whom their sponsor provided the spouse’s contact information. The other source of spouse non-response, however, is spouses of married Panel 4 sample members who didn’t participate in Panel 4. We are currently seeking advice from experienced sampling statisticians on how to take account of this form of non-response.

(2) *Establishment of internal validity of comparisons.* Although the analysis of these data will involve many types of comparisons, the primary comparisons involve war zone deployment versus no war zone deployment. These comparisons will constitute a non-equivalent comparison group (quasi-experimental) design. Assessing the internal validity of such designs involves examining the overlap of the distributions of demographic and other important variables in the two groups. Groups are said to be non-equivalent to the extent that the distributions of independent variables overlap.

We will examine overlap using propensity analyses. We will begin again with a logistic regression model of being in the deployed group, and use that model to produce a predicted probability of being in the deployed group. Following procedures developed by Rubin and his colleagues, we will then organize the two groups (deployed vs non-deployed) into quintiles on the basis of their predicted probability scores. Examination of the balance of the quintiles within and across groups provides important information about the comparability of the groups. If the quintiles are balanced within and across, the two groups can be considered “equivalent,” and if not the patterns of the quintiles can point to which quintiles are equivalent and which are not.

### **Outcome**

Deciding on design changes and implementing them in a survey that is already in the field is very challenging. With guidance from Dillman, however, the NHRC FamCo staff did a terrific job on both. Although doing so took time, energy, and resources, over the months of the fourth year the response rates rose steadily as the various changes were implemented, doubling the

response rate for spouses who were referred by their service member from 5231 in October of 2012 to 10,065 by May of 2013 (see Appendix C).

## 2.4 Barriers to Progress & Solutions

The following highlights key barriers to progress encountered during year three and solutions to address encountered barriers. Details concerning the barriers and solutions are provided in the preceding sections.

### Barriers to Progress:

- Low response rates for service members in the Panel 4 sample;
- Additional funding for NHRC data collection effort to improve staffing ability, survey implementation, and response rates with Panel 4 respondents; and,
- Budget revisions and modifications to the Abt team's analytic scope of work to accommodate additional data collection effort.

### Solutions:

- Addition of Dr. Dillman to the team and development of an ongoing consulting agreement for services to improve panel four response rates ;
- Modification of recruitment approach to include both referred and non-referred spouses; and,
- Modification to the scope of work to support additional data collection effort through: additional staff for NHRC; and, increased funding for survey implementation communication strategies and respondent incentives.

## 2.5 Next Steps – Year 4

The following highlights some of the key data collection and data analysis activities for year four of the project.

- Continue monitoring survey implementation and improvements in response rates for panel four respondents;
- Implement final strategic changes in communication strategies with panel four respondents to promote continued improvements in survey response rates; and,
- Close out data collection effort and begin implementation of data analysis protocols.

### 3. Key Research Accomplishments

- Recruitment of experienced survey experts (Dillman, Kulka, others if needed) to review the survey design and suggest changes;
- Preparing for nonresponse and creating analysis weights to adjust for any nonresponse detected and all oversampling.
- Begin preparation for analysis of the baseline data;
- Budget revisions and modifications to the Abt team's analytic scope of work to accommodate additional data collection effort;
- Prepare for first follow-up of Panel 4 participants; and,
- Prepare for Panel 5 baseline survey.

## 4. Reportable Outcomes

N/A

## 5. Conclusions

N/A

## 6. Appendices

1. Appendix A: Mid-Term Analytic Objectives
2. Appendix B: 2013 Scientific Review Panel Presentations
3. Appendix C: Weekly Reporting – Survey Implementation & Response Rates

## Appendix A: Mid-Term Analytic Objectives



## Family Study Near and Mid Term Objectives

### First Aim

Aim 1: Explore the association between service member deployment (e.g. combat, duration, dwell time, and frequency) and the health and well-being of spouses and children				
Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Spouses & Children, Behavioral Health		Compare emotional, behavioral, and medical issues of spouses of service members deployed with and without combat to service members who have not yet deployed	Is there an association between service member deployment and spouse mental health (e.g., anxiety, panic, depression, PTSD)?	NYU & Abt
			Is there an association between service member deployment and spouse distress (e.g., somatization, alcohol misuse/abuse, tobacco use, aggression)?	NYU & Abt
			Is there an association between service member deployment and the functional and general health of spouses (e.g., sleep, # of dx conditions, PCS, body weight, fatigue, exercise)?	NYU & Abt
		Compare emotional, behavioral, and medical issues of children of service members deployed with and without combat to service members who have not yet deployed	Is there an association between service member deployment and child behavior (e.g., strengths and difficulties)?	Duke University & Abt
		Examine number and length of service member	Is there an association between the length of	Duke University & Abt

Aim 1: Explore the association between service member deployment (e.g. combat, duration, dwell time, and frequency) and the health and well-being of spouses and children				
		deployments in relation to spouse mental health outcomes	service member deployment and spouse emotional, behavioral, and physical health outcomes?	
		Examine number and length of service member deployments in relation to child behavioral outcomes	Is there an association between the length of service member deployment and child behavioral outcomes?	Duke University & Abt

## Second Aim

Aim 2: Explore the association between service member readjustment issues (e.g., PTSD, anxiety, depression, alcohol misuse/abuse) and the health and well-being of spouses and children				
Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Spouses & Children Behavioral Health, Substance Abuse		Assess association of service member readjustment issues with spouse health and well-being	Is there an association between service member PTSD, anxiety, or depression and spouse mental health and distress?	NYU & Abt
			Is there an association between service member alcohol misuse/abuse and spouse mental health and distress (e.g., somatization, alcohol misuse/abuse, tobacco use, aggression)?	NYU & Abt
			Is there an association between service member readjustment and somatic symptoms (includes sleep items)?	NYU & Abt
		Assess association of service	Is there an association	Duke University & Abt

<b>Aim 2: Explore the association between service member readjustment issues (e.g., PTSD, anxiety, depression, alcohol misuse/abuse) and the health and well-being of spouses and children</b>				
		member readjustment issues with child health and well-being	between service member readjustment and child behavioral, and health and well-being outcomes?	

### Third Aim

<b>Aim 3: Examine factors related to resiliency and vulnerability that moderate the association between deployments experiences and service member readjustment issues, and the health and well-being of spouses and children.</b>				
Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Spouses & Children Behavioral Health		Determine the relationship between social support (e.g., friends, family, co-workers, neighbors) and the health and well-being of spouses and children	Does social support moderate the relationship between deployment experiences and the health and well-being of spouses and children?	Duke University, NYU & Abt
			Does social support moderate the relationship between service member readjustment and the health and well-being of spouses and children?	Duke University, NYU & Abt
		Investigate the relationship between support services (e.g., return and reunion programs, mental health and primary care providers, clergy) and the health and well-being of spouses and children	Do support services moderate the relationship between deployment experiences and the health and well-being of spouses and children?	Duke University, NYU & Abt
			Do support services moderate the relationship between service member readjustment and the health and well-being of spouses	Duke University, NYU & Abt

**Aim 3: Examine factors related to resiliency and vulnerability that moderate the association between deployments experiences and service member readjustment issues, and the health and well-being of spouses and children.**

			and children?	
		Investigate the relationship between the stress of military life (e.g., multiple PCS moves) and the health and well-being of spouses and children	Does the stress of military life moderate the association between deployment experiences and the health and well-being of spouses and children?	Duke University, NYU & Abt
		Investigate the association between family characteristics (e.g., number and age of children in the household, children with special physical or mental health needs) and the health and well-being of spouses	Does the stress of military life moderate the association between service member readjustment issues and the health and well-being of spouses and children?	Duke University, NYU & Abt
		Investigate the association between family characteristics (e.g., number and age of children in the household, children with special physical or mental health needs) and the health and well-being of spouses	Do family characteristics moderate the relationship between deployment experiences and the health and well-being of spouses?	Duke University, NYU & Abt
		Investigate the association between family characteristics (e.g., number and age of children in the household, children with special physical or mental health needs) and the health and well-being of spouses	Do family characteristics moderate the relationship between service member readjustment and the health and well-being of spouses?	Duke University, NYU & Abt
		Examine the relationship between spousal adverse life events (e.g., adverse child events, major life events) and the health and well-being of spouses	Do adverse life events moderate the association between deployment experiences and the health and well-being of spouses?	Duke University, NYU & Abt
		Examine the relationship between spousal adverse life events (e.g., adverse child events, major life events) and the health and well-being of spouses	Do adverse life events moderate the association between service member readjustment and the health and well-being of spouses?	Duke University, NYU & Abt
		Explore the relationship between employment factors	Does employment moderate the association between	Duke University, NYU & Abt

**Aim 3: Examine factors related to resiliency and vulnerability that moderate the association between deployments experiences and service member readjustment issues, and the health and well-being of spouses and children.**

		and the health and well-being of spouses and children	deployment experiences and the well-being of spouses and children?	
			Does employment moderate the association between service member readjustment and the well-being of spouses and children?	Duke University, NYU & Abt
			Does dual service moderate the association between deployment experiences and the well-being of spouses and children?	Duke University, NYU & Abt
			Does dual service moderate the association between service member readjustment and the well-being of spouses and children?	Duke University, NYU & Abt
		Investigate the relationship between proximity to military services and the health and well-being of spouses and children	Does proximity to military services moderate the relationship between deployment experiences and the health and well-being of spouses and children and does this relationship differ by service component?	Duke University, NYU & Abt
			Does proximity to military services moderate the relationship between service member readjustment and the health and well-being of spouses and children and does this relationship differ	Duke University, NYU & Abt

**Aim 3: Examine factors related to resiliency and vulnerability that moderate the association between deployments experiences and service member readjustment issues, and the health and well-being of spouses and children.**

			by service component?	
		Explore the role of self-mastery in the health and well-being of spouses and children	Does self-mastery moderate the relationship between deployment experiences and the well-being of spouses and children?	Duke University, NYU & Abt
			Does self-mastery moderate the relationship between service member readjustment and the well-being of spouses and children?	Duke University, NYU & Abt

## Fourth Aim

**Aim 4: Examine factors related to marital quality and family functioning.**

Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Spousal and family functioning		Determine service member factors that are associated with spouse reports of marital satisfaction and family functioning	Is there an association between deployment experiences (e.g. combat, duration, dwell time, and frequency) and spouse reports of marital satisfaction and family functioning (e.g., communication and cohesion)?	NHRC, Duke University & NYU
			Is there an association between service member readjustment (e.g., issues and growth) and spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
			Is there an association	NHRC, Duke University &

Aim 4: Examine factors related to marital quality and family functioning.				
			between service member injury, PCS score, and number of doctor diagnosed conditions and spouse reports of marital satisfaction and family functioning?	NYU
			Is there an association between service member alcohol misuse/abuse or tobacco use and spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
	Determine support factors that are associated with spouse reports of marital satisfaction and family functioning		Is social support (e.g., friends, family, co-workers) associated with spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
			Is the use of support services (e.g., return and reunion programs, mental health and primary care providers, clergy) associated with spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
	Determine employment related factors that are associated with spouse reports of marital satisfaction and family functioning		Is there an association between employment factors (e.g., service member occupational codes, spouse full/part time/seeking) and spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
			Is there an association between service member work-family conflict and	NHRC, Duke University & NYU

**Aim 4: Examine factors related to marital quality and family functioning.**

			spouse reports of marital satisfaction and family functioning?	
			Is there a relationship between the gender of the service member and spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU
			Is there a relationship between dual service employment and spouse reports of marital satisfaction and family functioning?	NHRC, Duke University & NYU

## Fifth Aim

**Aim 5: Evaluate methodological approaches to ensure adequate representation of spouses from all service branches, Reserve, and National Guard; and assess validity of assessment measures and instruments.**

Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Survey and research methodology, PTSD, behavioral health	2012	Examine methodology and target enrollment population	Describe Family Study design process, objectives, target population, data collection (similar to Gray service member study paper)	Abt & NHRC
	2013		Evaluate referral and response rates to the Family Study with the implementation of novel methodological approaches	Abt & NHRC
	2013	Conduct non-response analyses to ensure adequate representation of spouses	Did Millennium Cohort Panel 4 referral non-response and Family Study non-response impact the representation of spouses in the Family Study?	Abt & NHRC

**Aim 5: Evaluate methodological approaches to ensure adequate representation of spouses from all service branches, Reserve, and National Guard; and assess validity of assessment measures and instruments.**

	2014	Examine baseline characteristics of Family Study enrolled sample	What are the baseline characteristics of Family Study participants and do they compare to other spouse study populations (similar to Ryan paper)?	Abt & NHRC
	2014	Assess validity of assessment measures and instruments	Is there concordance between spouse self-reported medical diagnoses and ICD-9 codes in Tri-care medical records?	Abt & NHRC
	2014		Are survey instruments internally consistent?	Abt & NHRC

## Sixth Aim

**Aim 6: Contribute data to the service member cohort study on spouse and child factors that are associated with service member health and well-being as well as length of service.**

Area of Concentration	Near/Mid Term FY	Objective	Specific Study Question	Project Lead/Analyst
Service member behavioral health, PTSD, physical health		Describe spouse related factors that are associated with service member health and well-being outcomes	Is there an association between the health and well-being of the spouse (e.g., physical health, mental health, stress, functional health) and the service member's mental and physical health?	NYU & Abt
			Is there a relationship between healthcare and support service utilization (e.g., return and reunion programs, mental health and primary care providers, clergy) by the spouse and the	NYU & Abt

**Aim 6: Contribute data to the service member cohort study on spouse and child factors that are associated with service member health and well-being as well as length of service.**

			well-being of the service member?	
			Is there an association between the self-mastery of the spouse and the service member's mental and physical health?	NYU & Abt
			Is there an association between spouse modifiable behaviors (e.g., alcohol use, smoking, sleep, exercise) and the service member's mental and physical health?	NYU & Abt
			What health and well-being factors of the spouse are associated with the military members' length of service and separation?	NYU & Abt
		Describe spouse and family functioning factors that are associated with service member length of service and separation	Is there a relationship between child health and well-being and the military members' length of service and separation?	Duke University & Abt
			Is work-family conflict associated with the military members' length of service and separation?	NHRC
		Explore the relationship between family functioning and service member health and well-being	Is there an association between family communication and functioning and service member health and well-being?	NHRC
		Describe factors associated with the health and well-	Are female service members with children that deploy at	Duke University & NHRC

**Aim 6: Contribute data to the service member cohort study on spouse and child factors that are associated with service member health and well-being as well as length of service.**

		being of service members in dual military families	greater risk for developing mental health problems than male service members or non-deploying females?	
--	--	--	--	--

## Appendix B: 2013 Scientific Review Panel Presentations

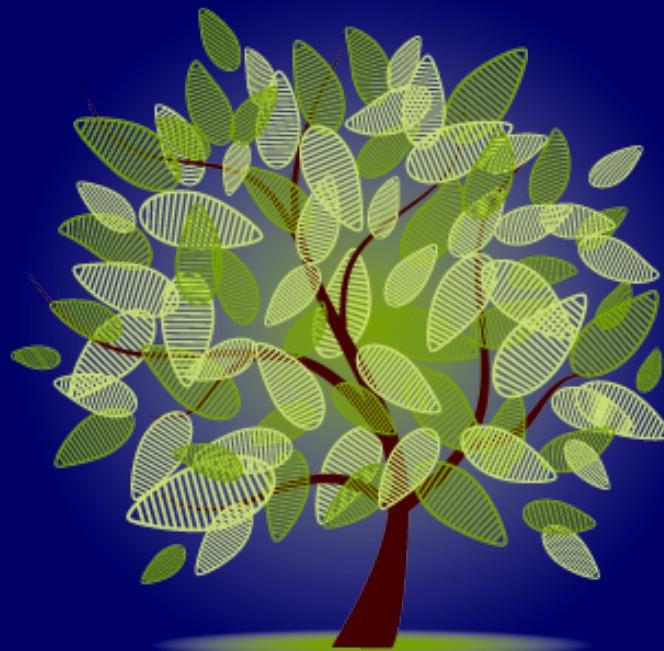


# Millennium Cohort Family Study

4<sup>th</sup> Annual Scientific Review Panel Meeting  
15 April 2013

0800	Welcome and Introductions
0815	Study Overview & Update (Crum-Cianflone) <ul style="list-style-type: none"><li>• Response, referral, and follow-up rates for both Milco and Family up to March 1<sup>st</sup></li><li>• Previous and current marketing strategies</li></ul>
0900	Success Stories (Dillman) <ul style="list-style-type: none"><li>• What worked well in this cohort and what should we do for the next survey cycle</li></ul>
0930	-SRP Discussion
0945	Break
1015	Preliminary Data Up to March 1st (Rush)
1045	-SRP Discussion
1100	Research Hypotheses & Analyses (Crum-Cianflone & Schlenger)
1130	Group Photo
1140	Lunch
1230	Future Plans (Crum-Cianflone & Fairbank)
1315	-SRP Discussion
1330	SRP Meeting
1400	Feedback and Additional Discussion
1415	Adjourn

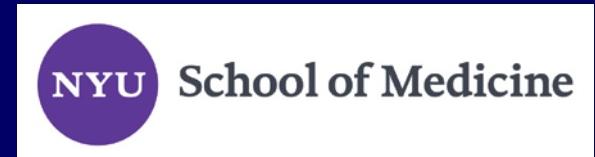
Because families serve too



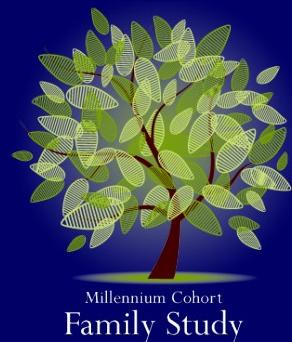
Millennium Cohort  
Family Study

## 4<sup>th</sup> Annual Scientific Review Panel Study Overview and Update

15 April 2013

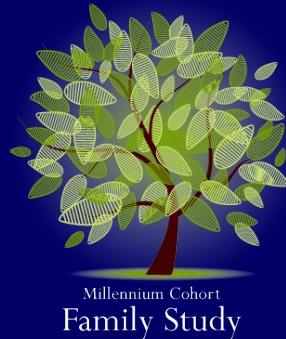


# Scientific Review Panel



- ❖ **Sanela Dursun, PhD**  
*Canadian Department of National Defense*
- ❖ **Cathy Flynn, PhD**  
*Office of the Undersecretary of Defense*
- ❖ **Shirley Glynn, PhD**  
*US Department of Veterans Affairs,  
Greater Los Angeles*
- ❖ **Michael Hurlburt, PhD**  
*University of Southern California*
- ❖ **Christine Johnson, MD, CAPT, USN**  
*Naval Medical Center San Diego*
- ❖ **Patricia Lester, MD**  
*University of California,  
Los Angeles*
- ❖ **Larry Palinkas, PhD**  
*University of Southern California*
- ❖ **Penelope Trickett, PhD**  
*University of Southern California*
- ❖ **Jennifer Vasterling, PhD**  
*US Department of Veterans Affairs,  
Boston*





# Outline

- **Summary of Study**
  - Study Origins and Objectives
- **Survey Methodology and Enrollment Status**
  - Millennium Cohort
  - Family Study
  - Future Projections
- **Next Steps**
  - Data Preparation
  - Methodological Studies
  - Near-Term Objectives
- **2014-15 Survey Cycle**
- **Successes and Challenges**
- **Conclusions**



April 2012 SRP

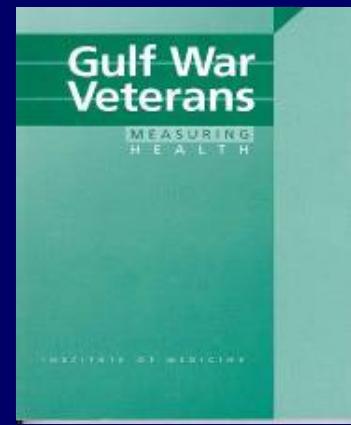
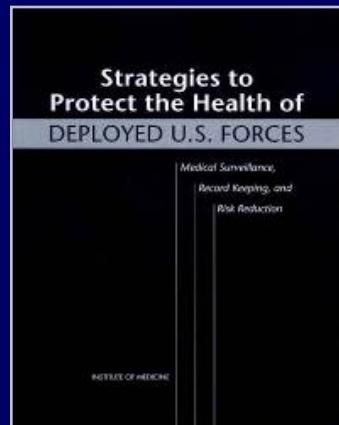


# Study Origins: Millennium Cohort Study

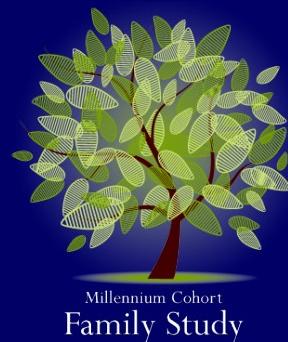


- Study conceived in 1999 after IOM recommendation for a coordinated prospective cohort study of service members
  - Capitalized on new DoD surveillance and health care data
- Objective: To prospectively evaluate the impact of military experiences, including deployment, on long-term health outcomes of US service members
  - To provide strategic policy recommendations that inform leadership and guide interventions

Section 743 of the FY1999 Strom Thurmond Act authorized the Secretary of Defense to establish a... **longitudinal study to evaluate data on the health conditions of members of the Armed Forces upon their return from deployment.**

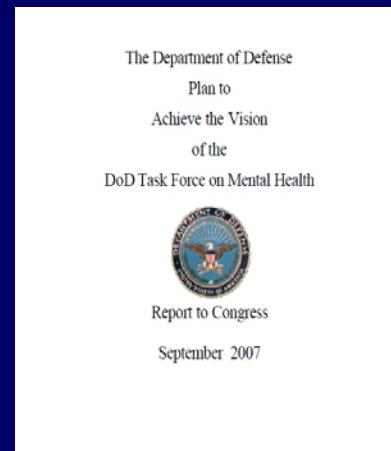
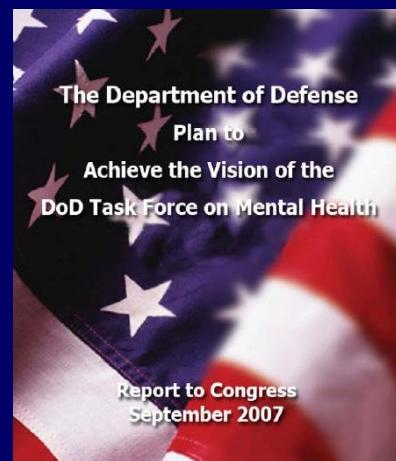


# Study Origins: Family Study

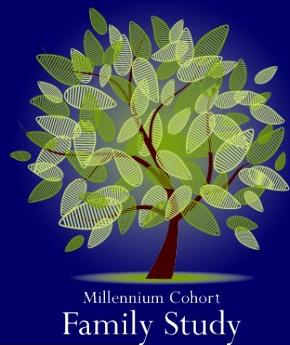


- DoD recommended to conduct research on post-deployment adjustment for family members, and on children who have been separated from their parents by deployment
- Gap analysis by MOMRP noted that studies of military families are a high priority issue, and identified family well-being as part of the “threats” to a fit force

*“Our ultimate goal is, as it has always been, to ensure that the health and well-being of our military personnel and their families is at the top of our list of priorities. Apart from the war itself, we have no higher priority!”*

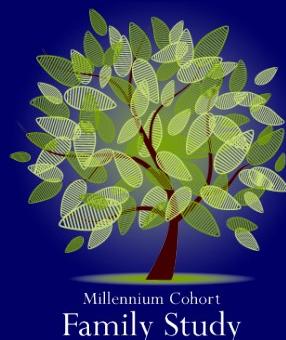


# Study Origins: Family Study



- **Study funded and designed in 2009**
- **Multidisciplinary team of investigators at NHRC, Abt Associates, Duke University, and New York University**
- **Survey operations conducted at NHRC in San Diego**
- **Study enrollment began in 2011 in conjunction with the enrollment of Panel 4 of the Millennium Cohort**



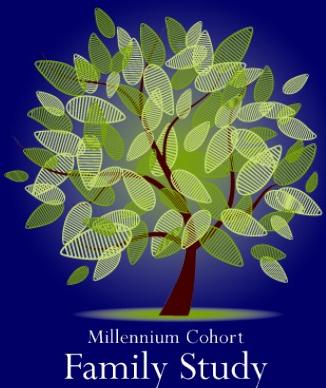


# Importance of the Family Study

- **~2.5 million service members have been deployed in support of operations in Iraq and Afghanistan**
  - >3 million dependents and >2 million children affected by the deployment of a parent
- **Military families play an important role in the health and well-being of service members, hence a critical role in the Armed Forces' ability to maintain readiness**
  - Critical need to understand and ameliorate the short- and long-term impacts of the current conflicts
- **The Family Study is uniquely positioned to provide critical data on the health and well-being of families**



# Overall Family Study Objective



- **To prospectively determine the association between military experiences, including deployments, and the health and well-being of military families**
  - To provide strategic evidence-based policy recommendations that inform leadership and guide interventions





# Integration within Millennium Cohort

- The Millennium Cohort Study was launched in 2001 prior to the conflicts in Iraq and Afghanistan
- Over 150,000 service members enrolled during 2001-2008 (Panels 1-3)
- Cohort members are surveyed every ~3 years via paper or web
- A 4<sup>th</sup> panel of new participants enrolled starting in 2011

**Panel 1: 77,047**

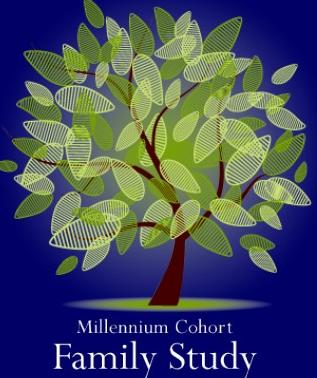
**Panel 2: 31,110**

**Panel 3: 43,440**

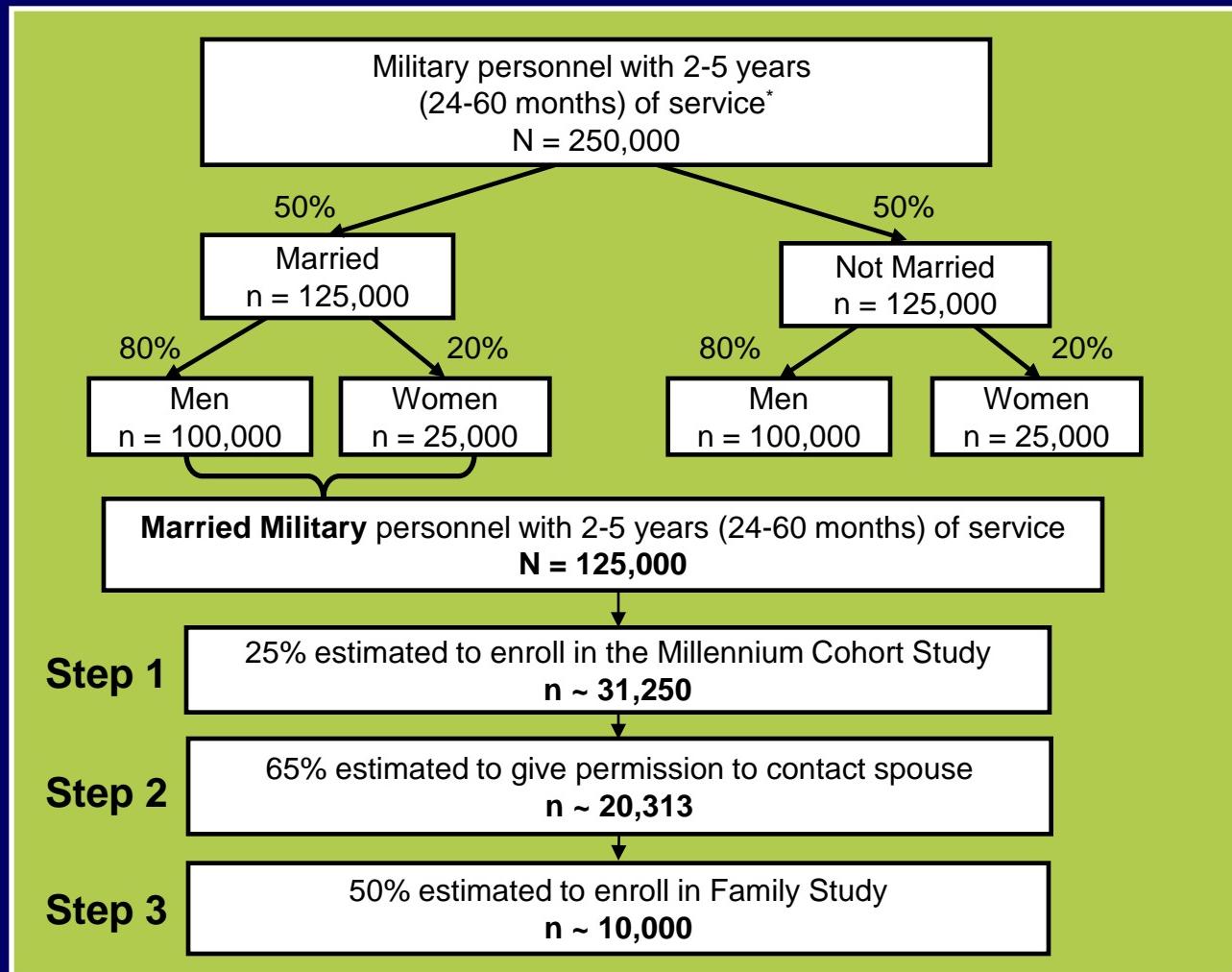
## Of those enrolled:

- **58% deployed in support of the operations in Iraq and Afghanistan**
- **47% Reserve Guard**
- **43% have separated from the military**





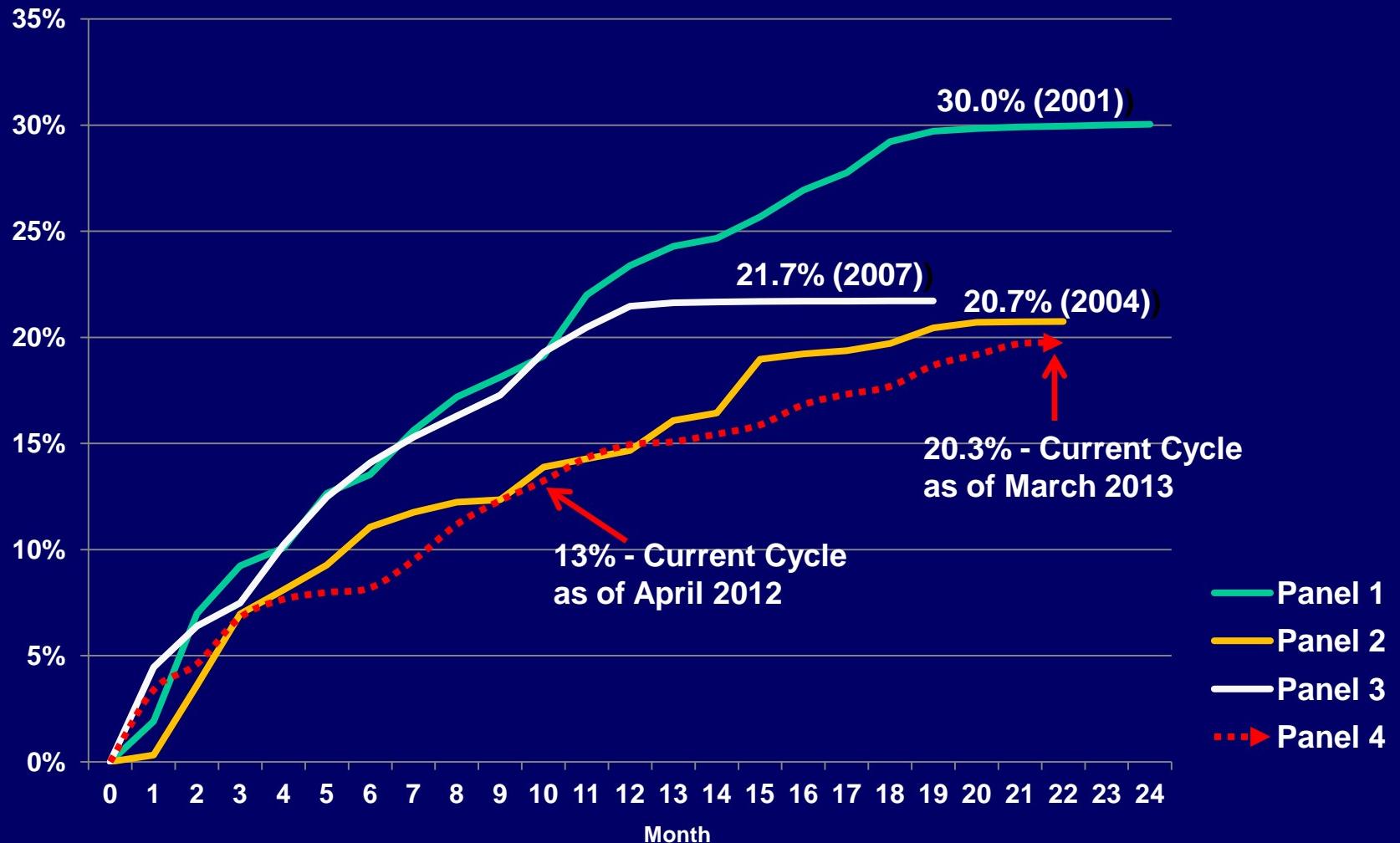
# Panel 4 and Family Study Enrollment



**Panel 4 of the Millennium Cohort Study includes a probability sample of military service members (active duty, Reserve, and National Guard)**

\*Oversampling for women and married service members

# Millennium Cohort Responses



# 2011-2013 Survey Cycle Update\*



Panel	Response Rate to Date
Panel 1, Wave 4	51,677 / 77,047 (67% follow-up rate)
Panel 2, Wave 3	15,145 / 31,110 (49% follow-up rate)
Panel 3, Wave 2	22,072 / 43,440 (51% follow-up rate)
Panel 4, Wave 1	50,698 / 250,000 (20% response rate)



**Married Service Members = 28,802  
(~57% of all P4 responders)**

\*Data up to 12 March 2013

**MOMRP**  
*Science to Soldier*

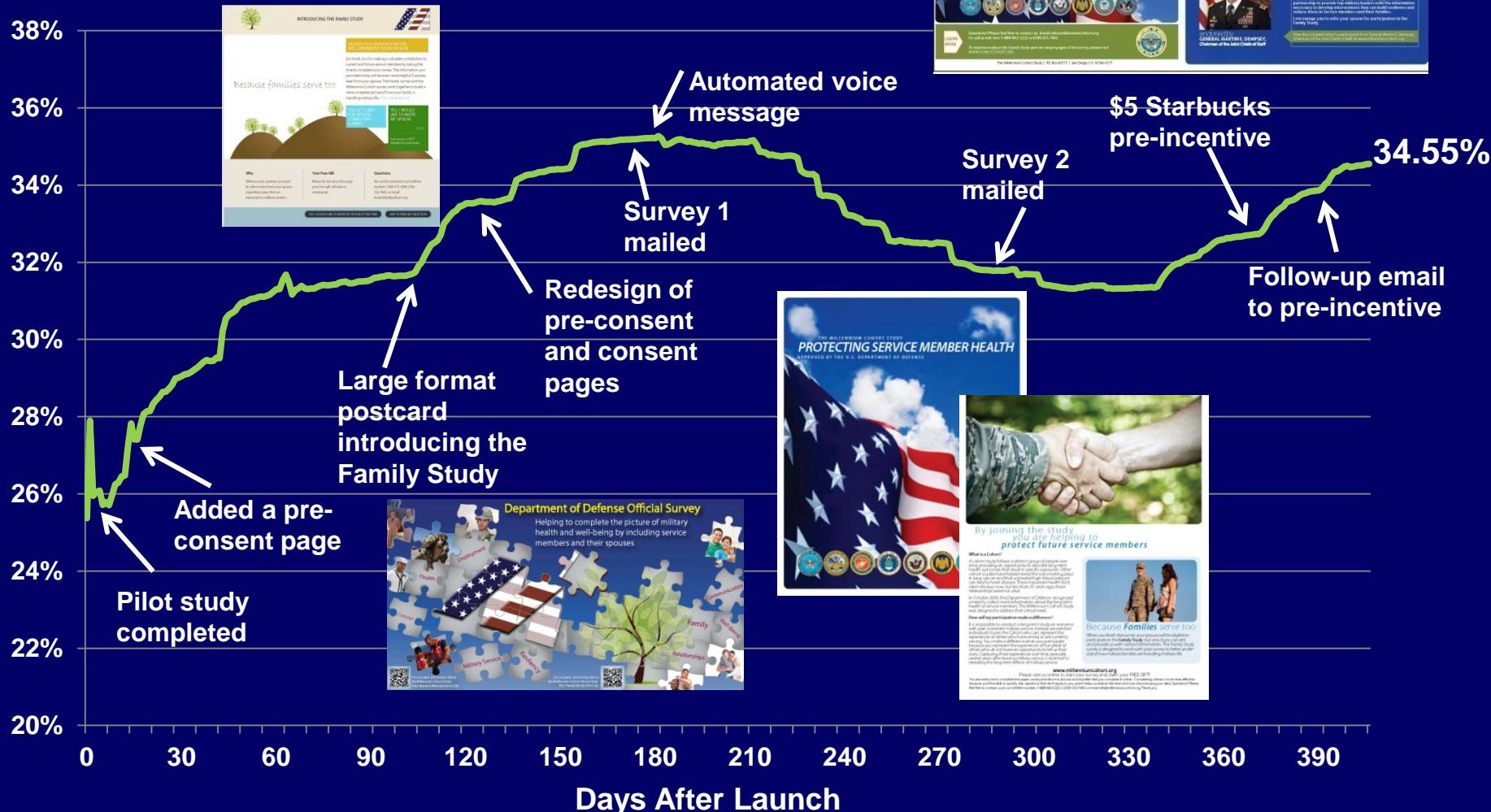


# Service Member Referral Rate

## June 2011 - July 2012

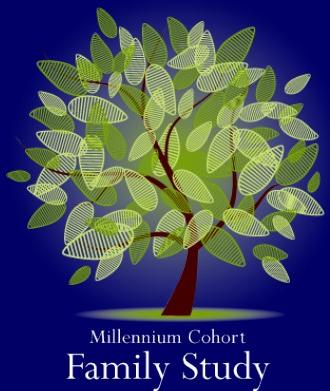


- 35% referral rate
- 7,063 referrals

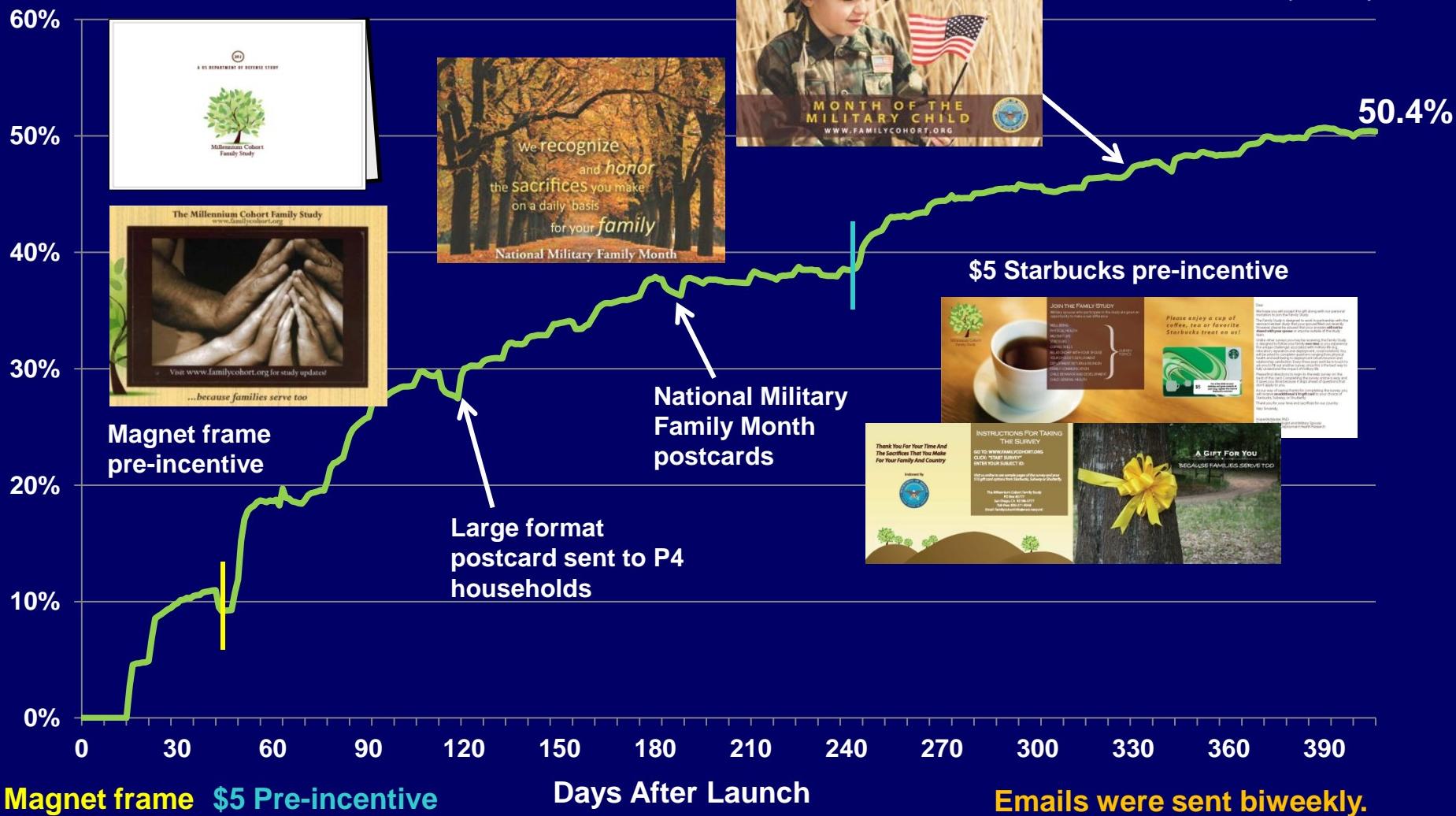


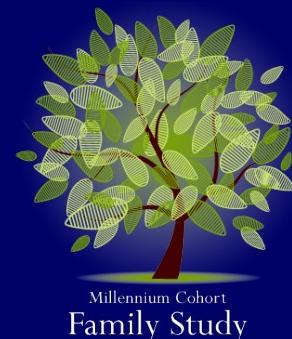
# Marketing to Referred Spouses

## June 2011 - July 2012



- 50% response rate
- 3,581 spouses enrolled





# Opened Enrollment to Non-Referred Spouses (July 2012)

- **Eligibility:**
  - Spouses of Panel 4 married responders that “skip” the referral page or completed a paper survey
- **Developed modified survey:**
  - Paper Family survey developed
  - Items requiring secondary consent (Your Spouse’s Behavior) were removed
- **No Email Address:**
  - Mail only marketing campaign

**BECAUSE FAMILIES SERVE TOO**

A STUDY OF HOW MILITARY SERVICE MAY AFFECT THE HEALTH AND WELL-BEING OF MILITARY FAMILIES

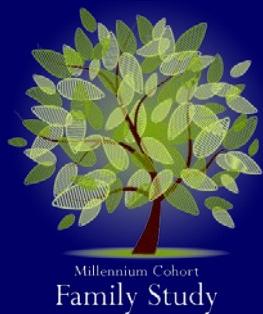
PLEASE COMPLETE THIS SURVEY AND RETURN IT IN THE PRE-PAID ENVELOPE      OR      GO TO [WWW.FAMILYCOHORT.ORG](http://WWW.FAMILYCOHORT.ORG) CLICK "START SURVEY"      ENTER YOUR SUBJECT ID: 



# Spouse Categories

- **With referral**
  - Email available
  - Rolling enrollment
  
- **Without referral**
  - Three random groups created from “newly” eligible spouses  
(July 17, 2012)
    - Group A (n=2,478)
    - Group B (n=2,477)
    - Group C (n=4,954)
  - Rolling enrollment
    - After July 17, 2012





# Survey Methodological Approaches

## Group A: Push to Web

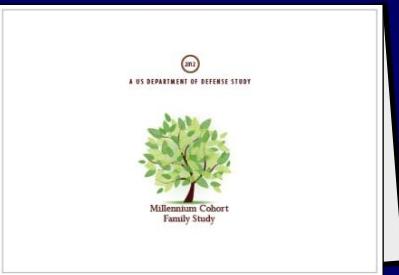
1. Magnet picture frame and card mailer (week 1)
2. Postcard reminder (week 2)
3. Sample survey with \$5 card (week 5)
4. Letter reminder (week 6)
5. Paper survey sent FedEx or USPS priority (week 9)
6. Postcard reminder (week 10)

## Group B: Push to Paper

1. Paper survey with magnet picture frame included (week 1)
2. Postcard reminder (week 2)
3. Paper survey with \$5 card (week 5)
4. Letter reminder (week 6)
5. Paper survey sent FedEx or USPS priority (week 9)
6. Postcard reminder (week 10)



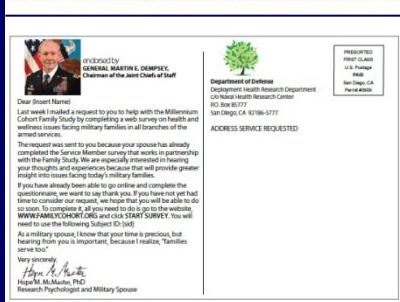
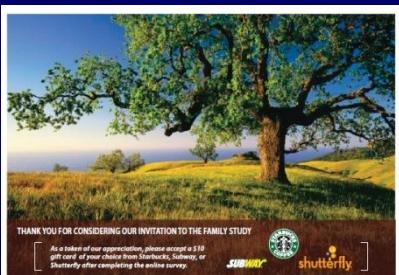
# A1



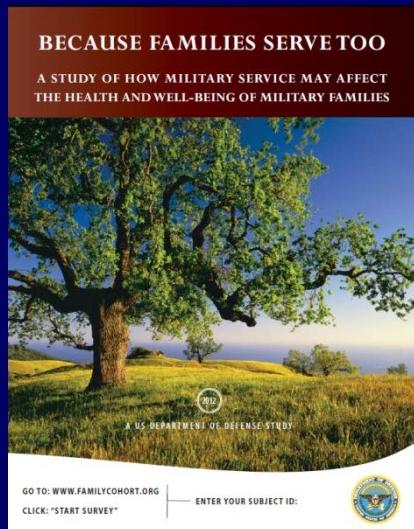
The Millennium Cohort Family Study  
[www.familycohort.org](http://www.familycohort.org)

Visit [www.familycohort.org](http://www.familycohort.org) for study updates!  
...because families serve too

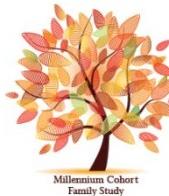
# A2



# A3

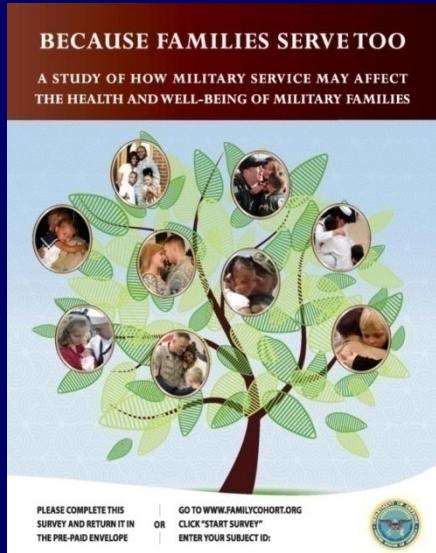


# A4



A NOTE FROM  
*Deanie Dempsey*  
Wife of the Chairman of the Joint Chiefs of Staff

# A5



WELL-BEING

Now, we would like to ask you about your mental well-being. These questions are about how you feel and how things have been going over the last 4 weeks.

Over the last 4 weeks, how often have you been bothered by any of the following problems?

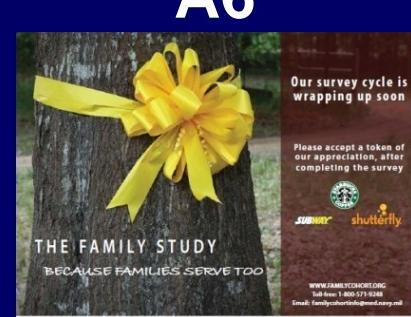
Feeling nervous, anxious, on edge, or worried a lot about different things	<input type="radio"/> Not at all	<input type="radio"/> Several days	<input type="radio"/> More than half the days
Next question			
Feeling restless so that it is hard to sit still	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting tired very easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle tension, aches, or soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble falling asleep or staying asleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming easily annoyed or irritable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the last 4 weeks, how much of the time...

None of the time	A little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
Did you feel full of pep?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been in a very nervous mood?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt so down in the dumps that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How often in the last 4 weeks did you...

Get angry at someone or shout at them	<input type="radio"/> Never	<input type="radio"/> One Time	<input type="radio"/> Two Times	<input type="radio"/> Three or four times	<input type="radio"/> Five or more times
Get angry with someone and want to hit them, break a window, or smash a door, punch the wall, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Threaten someone with physical violence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cry persistently or uncontrollably	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



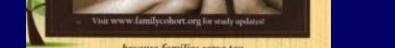
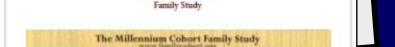
# B1

## BECAUSE FAMILIES SERVE TOO

A STUDY OF HOW MILITARY SERVICE MAY AFFECT THE HEALTH AND WELL-BEING OF MILITARY FAMILIES

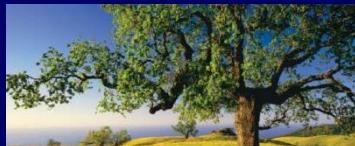


Millennium Cohort | PLEASE COMPLETE THIS SURVEY AND RETURN IT IN THE PRE-PAID ENVELOPE

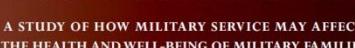


Via Fedex or  
Priority Mail

# B2



Millennium Cohort | PLEASE COMPLETE THIS SURVEY AND RETURN IT IN THE PRE-PAID ENVELOPE



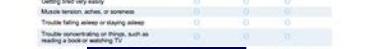
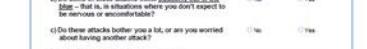
# B3

## BECAUSE FAMILIES SERVE TOO

A STUDY OF HOW MILITARY SERVICE MAY AFFECT THE HEALTH AND WELL-BEING OF MILITARY FAMILIES



Millennium Cohort | PLEASE COMPLETE THIS SURVEY AND RETURN IT IN THE PRE-PAID ENVELOPE



# B4



Millennium Cohort Family Study

A NOTE FROM  
*Deanie Dempsey*  
Wife of the Chairman of the Joint Chiefs of Staff

Millennium Cohort Family Study

# B6



Our survey cycle is wrapping up soon

Please accept a token of our appreciation, after completing the survey

THE FAMILY STUDY  
BECAUSE FAMILIES SERVE TOO

WWW.FAMILYCOHORT.ORG  
Tel: 1-800-571-9248  
Email: familycohort@navy.mil

PREPAID  
FIRST CLASS  
U.S.  
MAIL  
TO:  
JANET C.  
DEMPESEY  
Chairman of the Joint Chiefs of Staff

Dear (Insert Name)  
We greatly appreciate the large number of military spouses who have responded to the survey of the Millennium Cohort Family Study. Your responses help us understand better how military service affects families.

We would like to thank you for your participation in the survey. Please remember that we send by Federal Express last week and complete it, and not in the middle of the survey season, because the study will be coming to a close in just a few weeks.

You may also complete the survey online at [www.familycohort.org](http://www.familycohort.org). Just click on the "Survey" link.

The large number of individuals who have taken time to answer the survey will help greatly to improve the accuracy of analyses on how military service affects families. We thank you for your continued service, and many other issues, affecting long-term health and well-being of military families.

Thanks for considering our request, and we hope you have a joyful holiday season.

Very truly yours,

Hoyt M. McIntire, PhD

Research Psychologist and Military Spouse



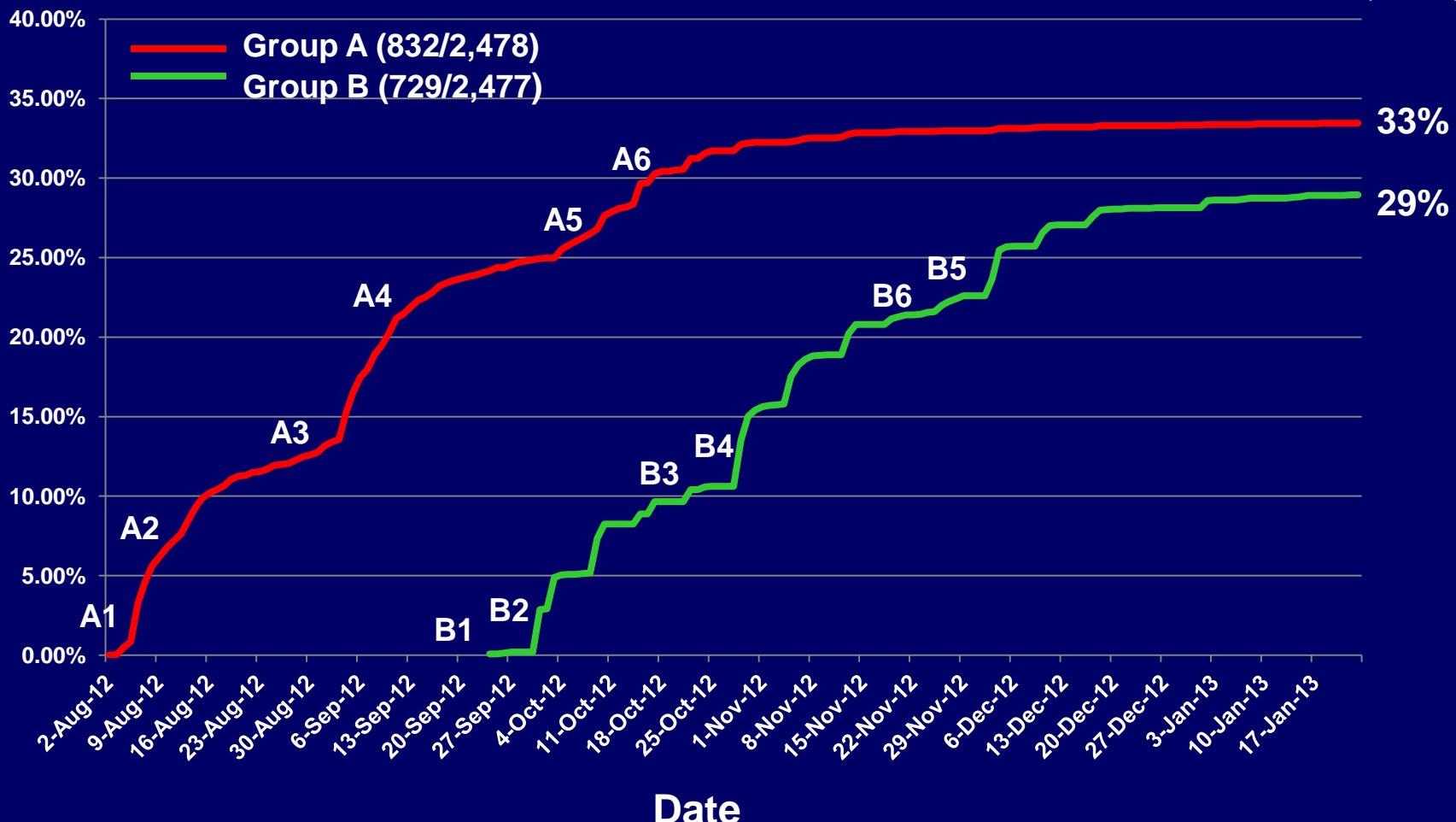
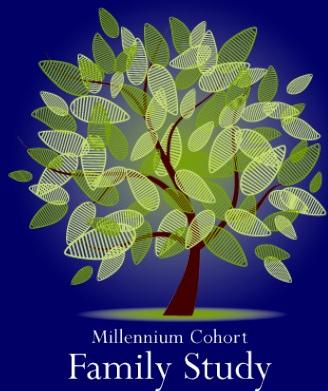
\$5



Millennium Cohort  
Family Study

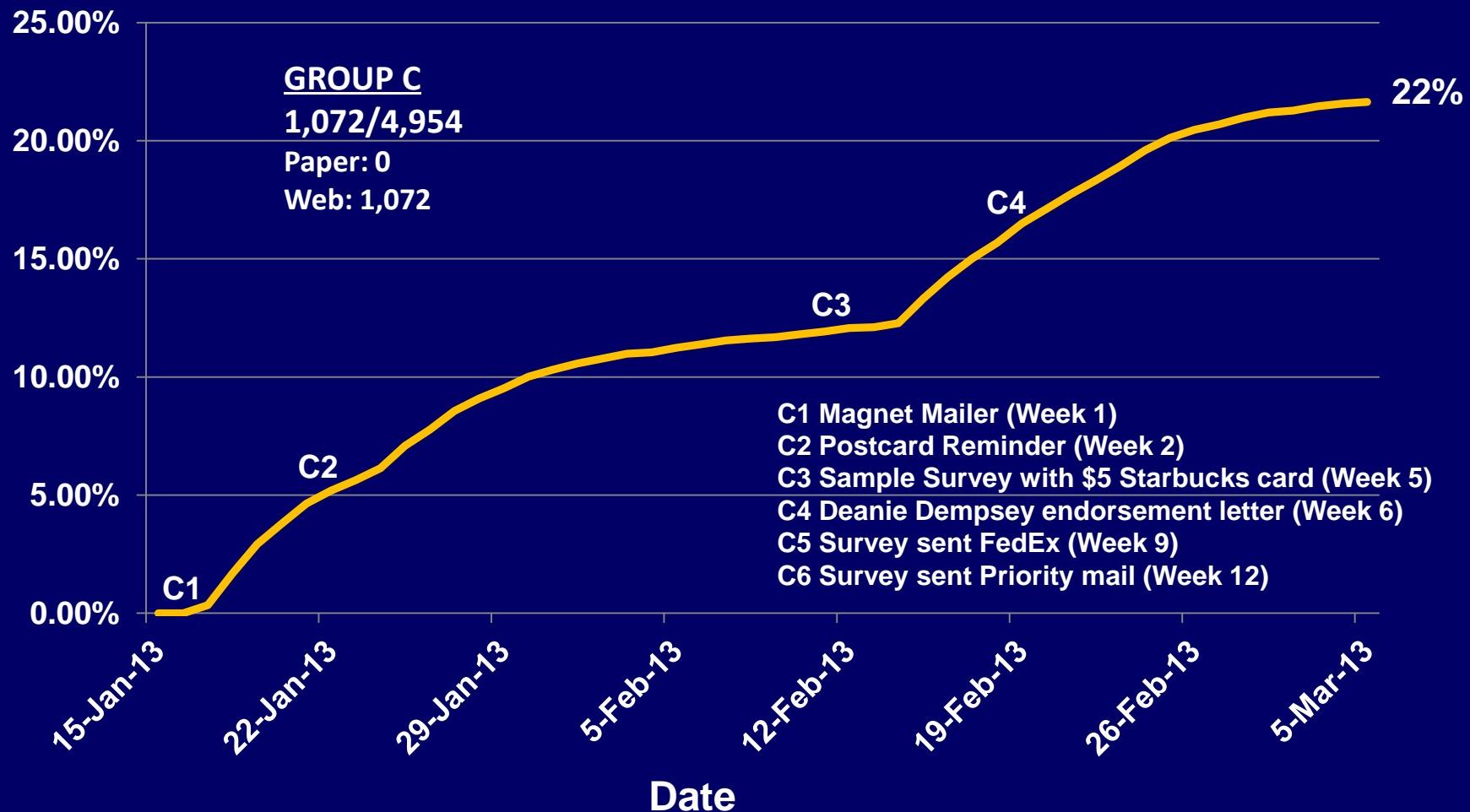
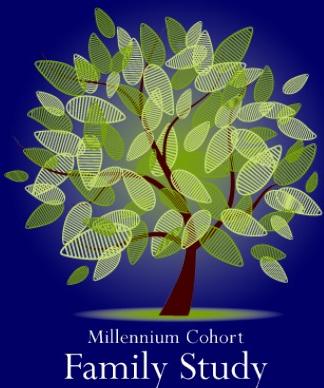


# Spouses without Referral (no email): Experimental Groups A & B

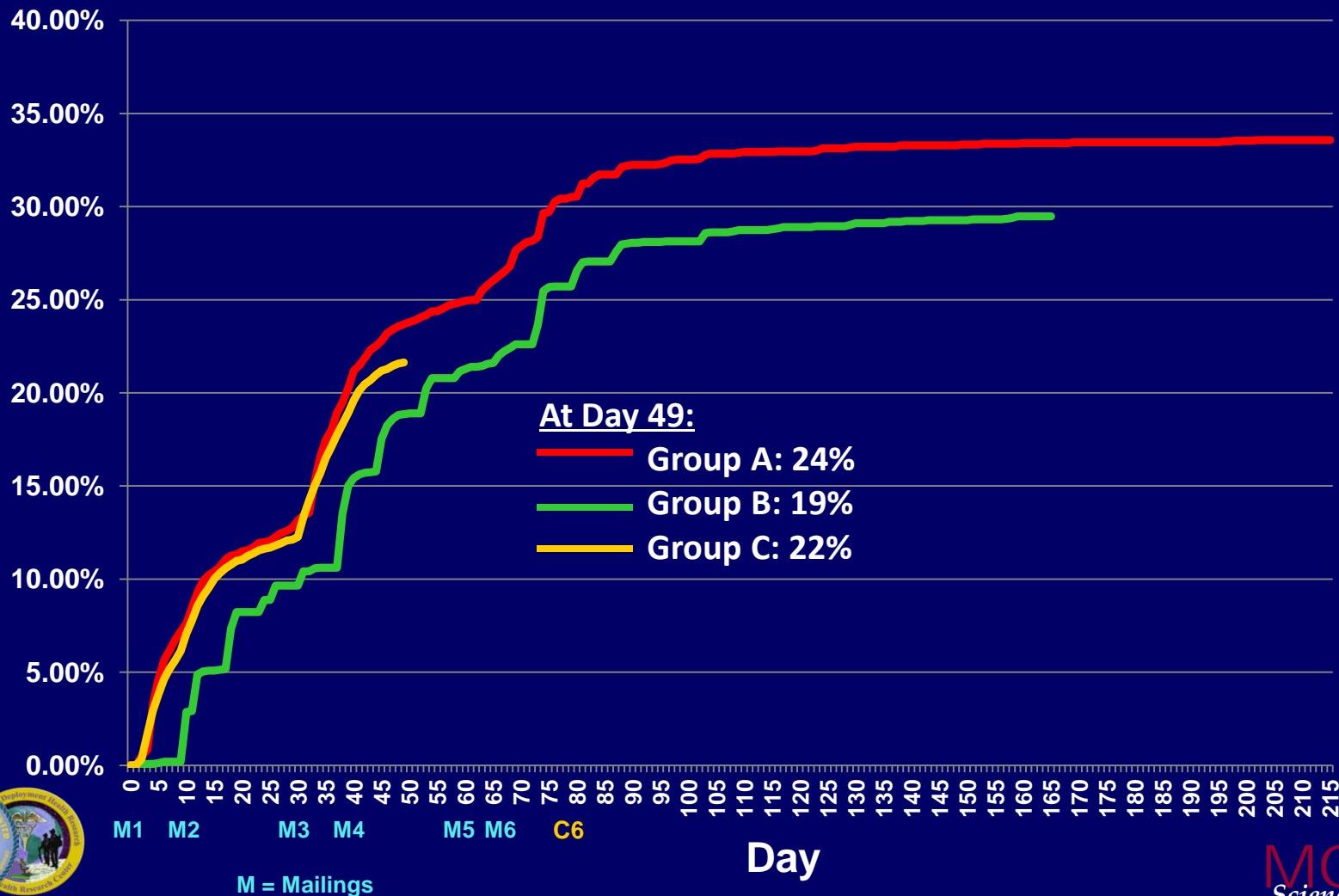
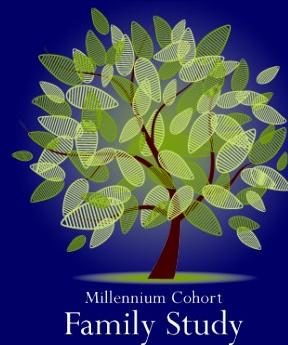


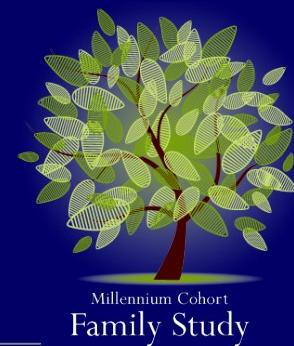
# Spouses without Referral (no email): Group C

Same as 'A' with last mailing a paper survey vs. postcard

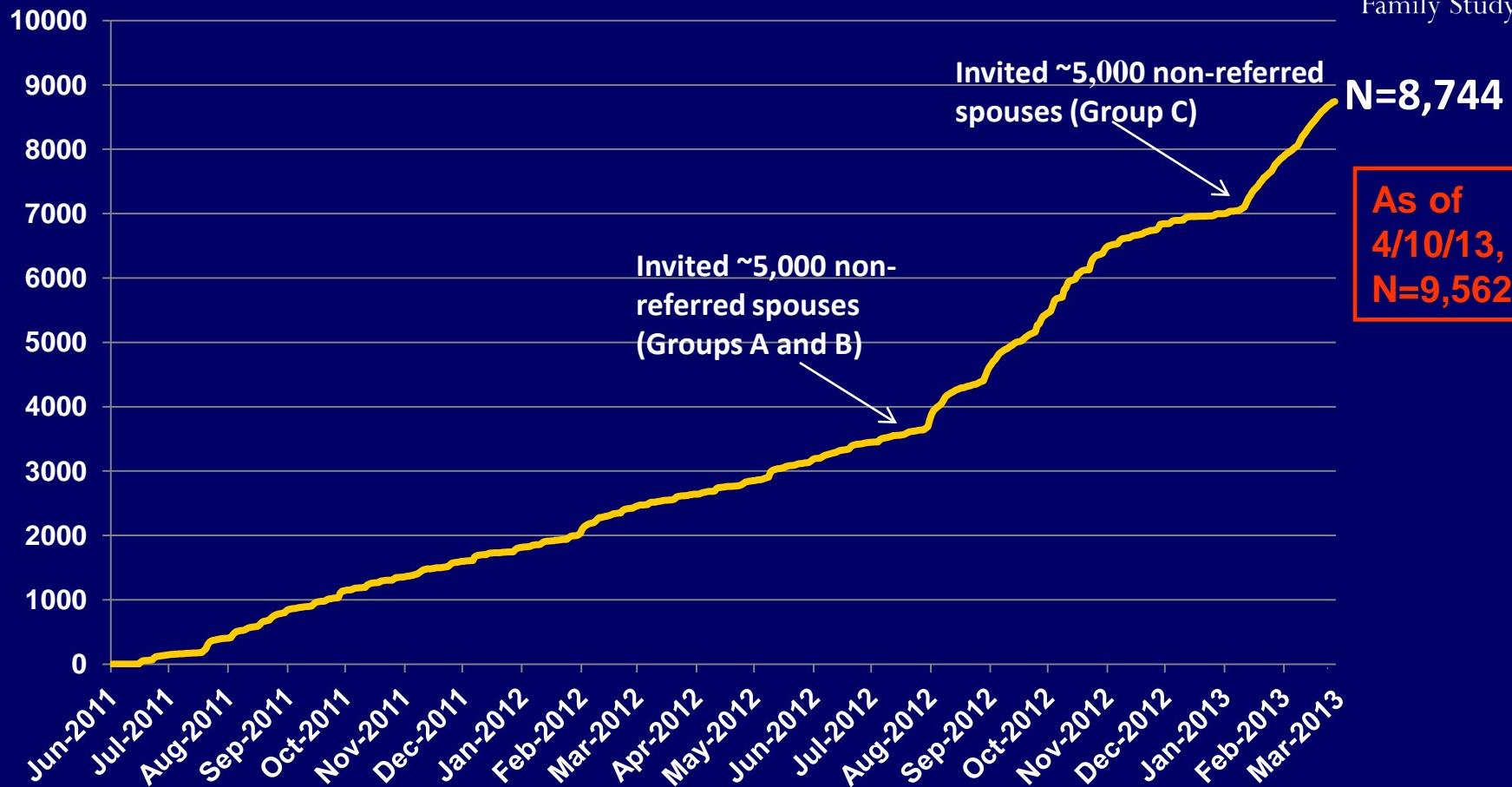


# Overall Response Rate of Groups A, B, and C by Day





# Overall Current Study Enrollment\*

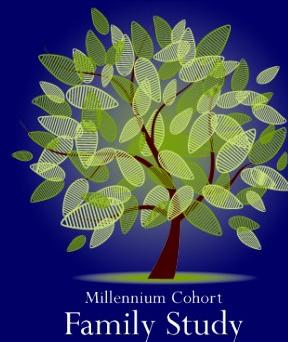


\*As of March 5, 2013



**MOMRP**  
Science to Soldier

# Overall Response Rates\*

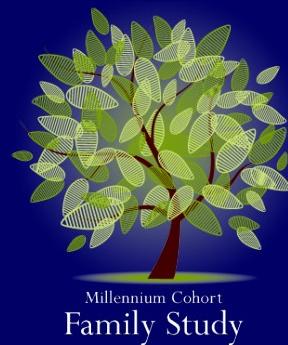


- **Family Study**
  - **Referred: 5,249/8,363 (63%)**
  - **Non-Referred: 3,495/14,159 (25%)**
  - **Overall of those invited as of 3/5/13: 8,744/22,522 (39%)**
- **Overall Representation (Dillman calculation):**
  - **23% of married P4 Millennium Cohort responded (28,802/124,147)**
  - **30% of spouses responded, cycle still ongoing (8,744/28,802)**
  - **Overall = 7%**

\* As of 3/5/13

MOMRP



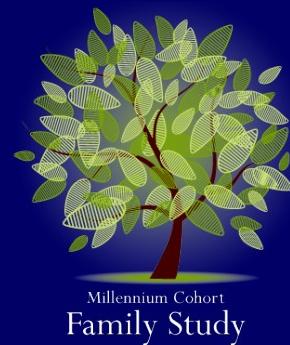


# Web vs. Paper Completers\*

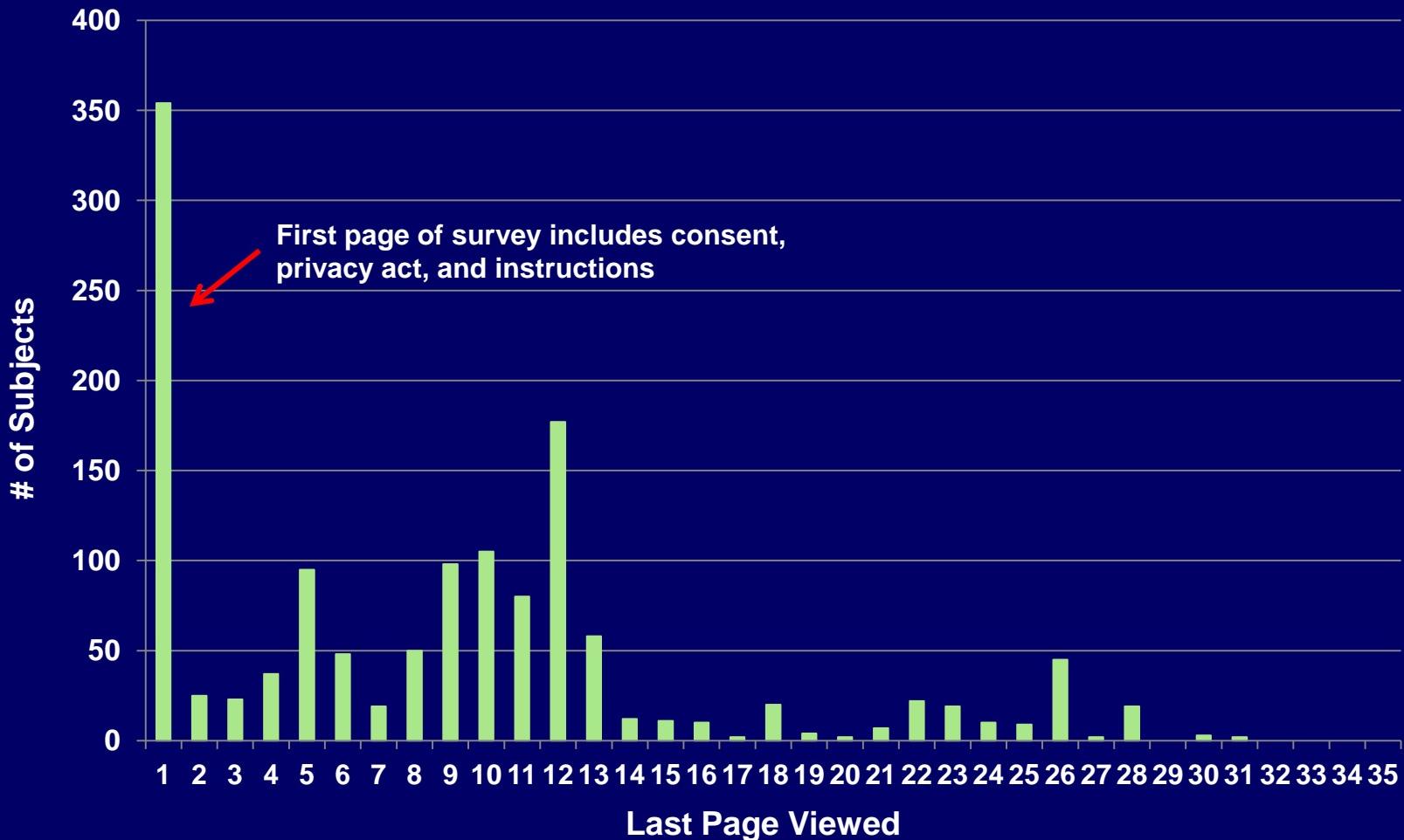
- **TOTAL ENROLLED: 8,744**
  - **Paper: 1,054 (12%)**
  - **Web: 7,690 (88%)**
- **NON-REFERRED GROUP**

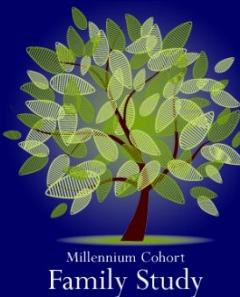
Group	Web	Paper
A	<b>717 (86%)</b>	<b>115 (14%)</b>
B	<b>34 (5%)</b>	<b>696 (95%)</b>
C	<b>1,072 (100%)</b>	**

# Incomplete Surveys



- N = 1,039 (11%) people logged on and consented to the study, but did not complete the survey (excludes page 1)





# Study Progress

## ➤ Methods used to improve service member response rates

- Additional questionnaire sent to Panel 4 with pre-incentive magnet with “new” design
- Tailored emails with study’s findings
- Obtained endorsements from high ranking enlisted personnel
- Worked with service branches to improve email delivery
- Posted notifications via military channels
- Advertised Family Study on postal mailings and web
- Email augmentation techniques
- Decreased communication burden and enhanced sequence of communications
- Created linkage through NHRC website:  
***<http://www.med.navy.mil/sites/nhrc/pages/department164.aspx>***





# NHRC Website

Naval Health Research Center

Naval Health Research Center | Commanding Officer | Overview | Contact Us | Research | Publications | Units | Visitors | DWA

Navy Medicine > Naval Health Research Center > Department 164

**Department 164**

**Libraries**

**Commanding Officer**

**Overview**

**Contact Us**

**Research**

**Publications**

**Units**

**Missions**

**DWA**

**Public Affairs**

**Freedom of Information Act**

**Contact Information:**

Phone: (888) 942-5222, DSN: 553-7465, E-mail: milcohortinfo@med.navy.mil

**Description:** The Naval Health Research Center (NHRC) was designated as the United States Department of Defense (DoD) Center for Deployment Health Research, September 30, 1999 by the Assistant Secretary of Defense for Health Affairs. It includes conducting epidemiological studies on the health of service members and their families. An experienced department staff and flexible framework provide the ability to quickly adapt and confront novel health concerns such as psychology, reproductive health, complex data management, large mail and telephone surveys, and occupational health. Included among the core programs of the Deployment Health Research Department are the Millennium Cohort Registry and the Myocarditis Registry.

**Millennium Cohort Study:** The Millennium Cohort Study, the largest prospective health study in the military with more than 150,000 participants at present, meets this critical need. Although the original designers of the study anticipated deployment of more than 50% of Millennium Cohort participants in support of the wars in Iraq and Afghanistan, deployment of less than 20% has enabled investigators to prospectively evaluate detailed data from before, during, and after these conflicts. The Millennium Cohort Study is poised to provide critical information toward understanding the long-term health of military members, thus contributing to force health protection, a DoD priority.

**PROTECTING SERVICE MEMBER HEALTH**  
APPROVED BY THE U.S. DEPARTMENT OF DEFENSE

MILLENNIUM COHORT STUDY

MORE INFORMATION

CLICK HERE

**Millennium Cohort Family Study:** Launched in 2011, the Millennium Cohort Family Study is conducted in tandem with the Millennium Cohort Study to better understand how military families are coping with military life. Families of service members who participate in the Family Study will be asked to complete a survey every year for 10 years. This study will provide a scientifically sound foundation for understanding the relationships among multiple factors related to family member functioning and family dynamics. This information may facilitate identification of families who are at risk for problems and help to develop interventions to support service members and their families.

**Because Families Serve Too**

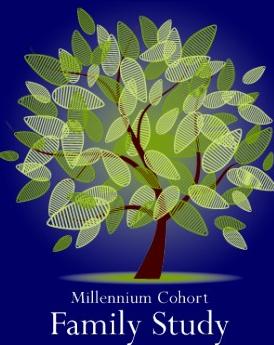
MILLENNIUM COHORT FAMILY STUDY

MORE INFORMATION

CLICK HERE

MOMRP



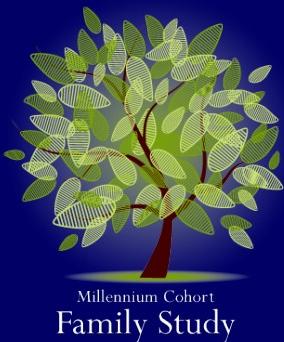


# Study Progress

- **Methods used to improve spouse response rates**
  - Invited spouses with and without referral
  - Implemented a highly effective 6-step mail approach
  - Tailored messages to spouses
  - Obtained endorsement from Deanie Dempsey
  - Introduced a paper survey (provided a second mode to respond)
  - Utilized pre-incentives (magnet, \$5 gift card)
  - Used email augmentation when available



# Study Progress



- **Endorsement letters:**
  - General Martin Dempsey, Chairman of the Joint Chiefs of Staff
  - Deanie Dempsey, military spouse and advocate for military families
  - Request for endorsement made to Michelle Obama and pending response

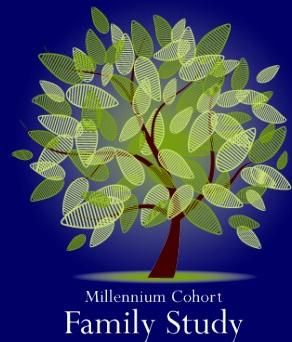


- **Updated website:**
  - Enhanced diversity of images
  - Includes preliminary demographics
  - Videos in development

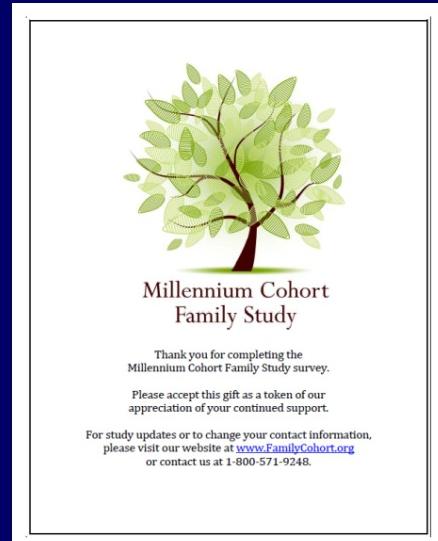
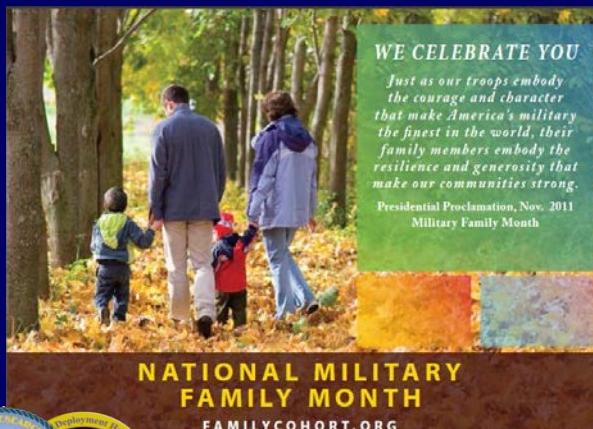
A screenshot of the Millennium Cohort Family Study website. The header features the study's name and a stylized tree logo. A banner at the top right reads "Because Families Serve Too". The main content area includes a photograph of a yellow ribbon tied to a tree trunk, a text box about the study's partnership with the Millennium Cohort Study, and a large button labeled "START YOUR SURVEY". Navigation links like "HOME", "ABOUT THE STUDY", and "START SURVEY" are visible at the top.



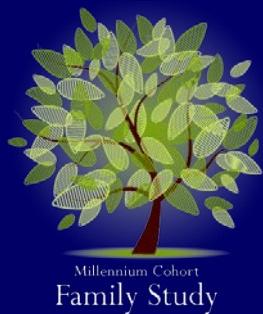
# Additional Participant Contacts



- **Holiday Greeting card**
- **Welcome to the Family Study card**
- **Post-survey incentive gift card**
- **Postcards for:**
  - **National Military Family Month (November)**
  - **Month of the Military Child (April)**



**MOMRP**  
Science to Soldier



# Projected Total Family Response by End of Survey Cycle

- Based on Group A response rates

**9,562 current responders\***

**347 projected to enroll**

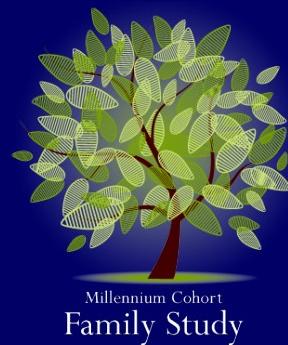
**+ 130 web incompleters**

---

**10,039 PROJECTED TOTAL**

**Total Family Response ~ 10,039**

\*As of April 10, 2013



# Next Steps

- **Finish survey cycle – end of June/early July**
- **Scan paper surveys into an electronic form**
- **Clean, verify, and validate survey responses** ➔ **Clean dataset**
- **Conduct non-response analysis**
  - **Service member responders compared to non-responders**
  - **Service members that do and do not make referrals**
  - **Service members whose spouses enrolled in the Family Study compared to non-responders**
  - **Spouse responders vs. non-responders**
  - **Enrolled spouses compared to those of military members with 2-5 years of service**





# Study Products

Near

Foundation Studies

Methodology, Non-response Analyses,  
Baseline Characteristics,  
Instrument Reliability And Validity

Service Member Deployment

Non-deployed  
Non-combat Deployed  
Combat Deployed

Spouse and Child  
Health & Well-being

Service Member  
Readjustment

Mental Health Issues  
Alcohol Abuse/Misuse

Spouse and Child  
Health & Well-being

Service Member Factors  
Support Factors  
Employment Factors

Marital Quality and Family Functioning

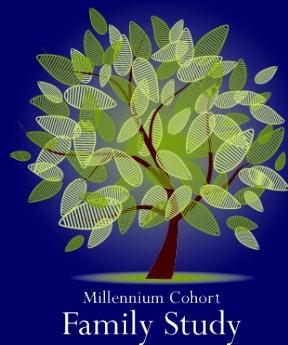
Far

Service Member Deployment  
and Readjustment

Resiliency and  
Vulnerability  
Factors

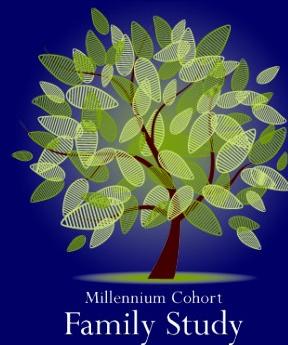
Spouse and Child  
Health & Well-being

# 2014-2015 Survey Cycle



- Design of the next survey cycle is underway based on successes of the current cycle
- Cohort is now “defined” so spouses will be asked to complete the follow-up at the same time at Panel 4
- OMB/RCS package with 2014-2015 survey questions submitted 24 months in advance and approval is pending





# Successes

- **Successful enrollment of a large cohort of spouses (~10,000)**
- **Ability to link spouse data with service member surveys and DoD health records**
  - Unprecedented ability to understand the impact of military life on families
- **Development of a highly effective survey strategy to reach and engage spouses in this study**
- **Expansion of study team with several additional members to conduct the study and perform data analyses**



## NHRC

**Nancy Crum-Cianflone, MD, MPH, PI**

**Evelyn Davilla PhD, Epidemiologist\***

**Cynthia LeardMann, MPH, Epidemiologist**

**Isabel Jacobson, MPH, Epidemiologist**

**Toni Rush, MPH, Data Analyst\***

**Amber Seelig, MPH, Data Analyst**

**Raechel Del Rosario, MPH, Lead Coordinator\***

**Kari Sausedo, MA, Study Coordinator**

**William Lee, IT Specialist**

**Gordon Lynch, Web Developer**

**Steven Speigle, Data Manager**

**Jim Whitmer, Data Manager**

**Roy Nesbitt, MFA, Marketing Specialist**

**Michelle Linfesty, Director of Operations**

## Abt Associates

**William Schlenger, PhD, Co-PI**

**Doug Fuller, PhD**

## Duke University

**John Fairbank, PhD, Co-PI**

**Ellen Gerrity, PhD**

**Lisa Amaya-Jackson, MD, MPH**

**Ernestine Briggs-King, PhD**

**Robert Lee, MA, MS, Data Analyst**

## New York University

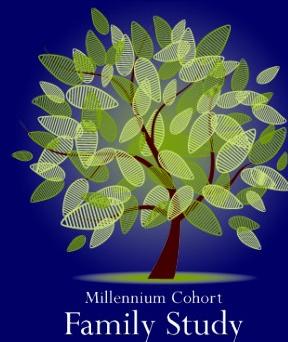
**Charles Marmar, MD, Co-PI**

## Washington State University

**Donald Dillman, PhD**

**Survey Consultant**

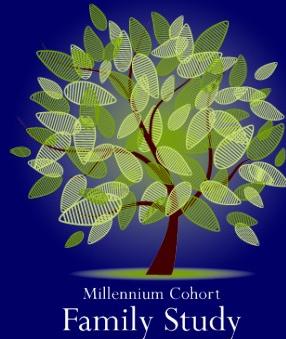
\*Abt employees located at NHRC



# Challenges

- **Study is longitudinal – funding decrements in DoD research is a concern**
  - Budget submitted for the continuation of the current cohort
  - Funding is unclear regarding the possibility of a 2<sup>nd</sup> panel of spouses during the next cycle
- **Engagement of spouses even after their service member separates from the military**
  - A challenge which is already being addressed in the Millennium Cohort Study
  - Methods to leverage the service member-spouse connection
- **Engagement of spouses even after separation, divorce, or becoming widowed**
- **Additional data on the children, especially as they age**

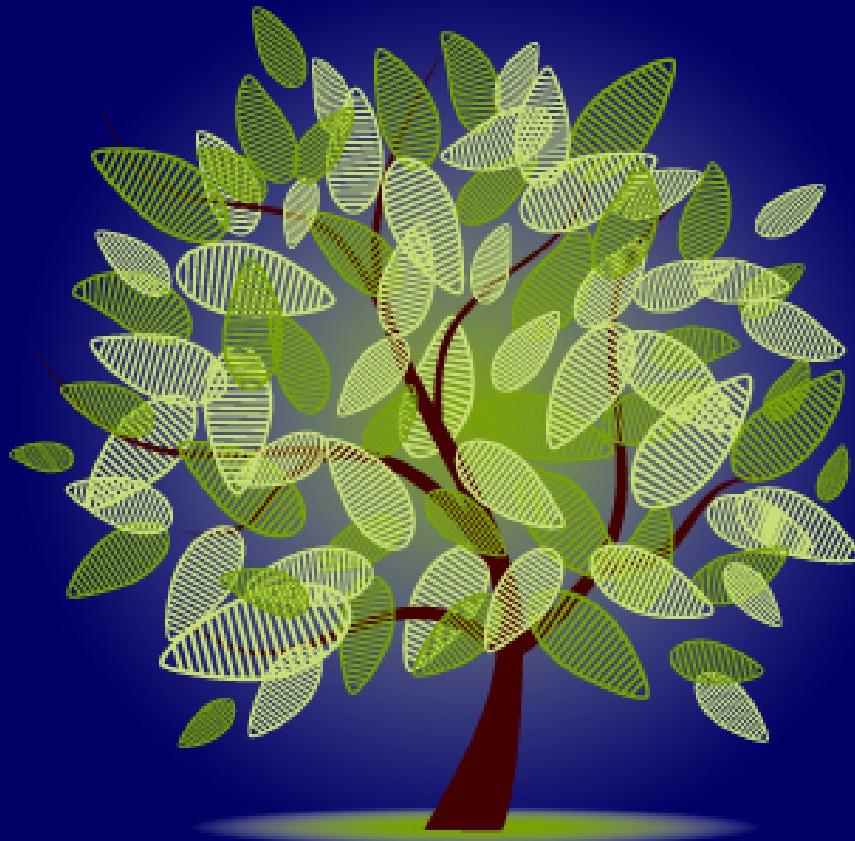




# Summary

- **The Family Study is the only prospective service-wide military study that collects information on the service member-spouse dyad**
  - Determines the impact of service member's military experiences on family outcomes
- **Ability to explore important subpopulations**
  - Reserve and National Guard families, dual military families, and male military spouses
- **Upcoming analyses will provide critical data for DoD leaders and policymakers to more fully understand the impact of military service on families, and provide information for the development of preventive and interventional programs**





Millennium Cohort  
Family Study

# **Development of a More Effective Approach for Obtaining Responses to the Millennium Cohort Family Study**

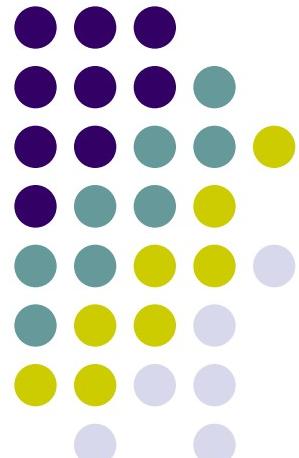
**DRAFT 4/11/13**

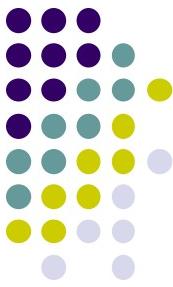
By  
Don A. Dillman\*  
Washington State University  
for

**Naval Health Research Center and Millennium Cohort  
Military Member and Family Studies**

**April 17 2013**

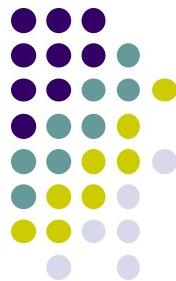
- Regents Professor, Department of Sociology and the Social and Economic Sciences Research Center, Washington State University, Pullman, WA 99164-4014 [dillman@wsu.edu](mailto:dillman@wsu.edu), <http://www.sesrc.wsu.edu/dillman/>





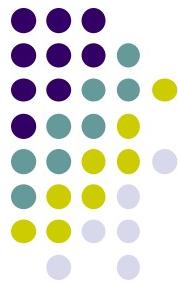
# Purpose

- In 2012 substantial effort was focusing on innovating a more effective implementation strategy.
- My purpose is to describe selected aspects of that rethinking, findings from an experiment, and the implications for future data collection.



# The Challenge

- Develop elements of an implementation strategy so each would “pay its own way” i.e. contribute significantly to improved response.
- Create an implementation system that would be effective...
  - without requiring referral and address information from one’s spouse
  - in a short period of time (2-3 months).
  - Reduce non-response error (respondents being different from non-respondents).



# Sources of ideas

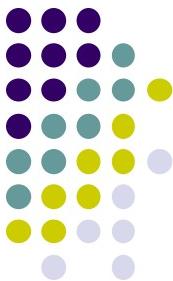
- Knowledge of Techniques used for the Millennium Cohort and Family collections that seemed most effective.
- Insights from survey methodology research on data collection for other populations and topics that might be applied in the military family situation.

# Ideas drawn from previous work by Family Study Staff



- Graphical development of ways to convey the importance of the Family study to target audience.
- Endorsements from General and Mrs. Dempsey.
- Mail-out packaging techniques that varied in size, format, and content.

# Conclusions from research findings in the published literature (1)



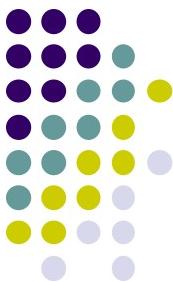
- Providing only an internet response option reduces response rates significantly.
  - Email only contacts lack authenticity, and deletion is a routine.
- Relying primarily only on email contact produces lower response rates than when supporting modes of contact are also used.
  - Postal + email + telephone more effective than only one contact mode. (This suggests obtaining and using multiple points of contact).
- Providing pre-incentives with the request produces higher response rates than offering post-incentives only to those who respond.

.



## Conclusions from research findings in the published literature (2)

- Token cash pre-incentives are more effective than material (e.g. gift coupons) incentives.
- Synergy can be created between appropriate incentives and multiple contacts.
- An objective of incentives is to lower non-response error (the extent to which respondents differ from non-respondents—this is a worry because of lower response from young military members and those with less education.)



# Research finding: Small pre-incentives are more effective than large post-incentives

Response rates by Contacts and Incentives

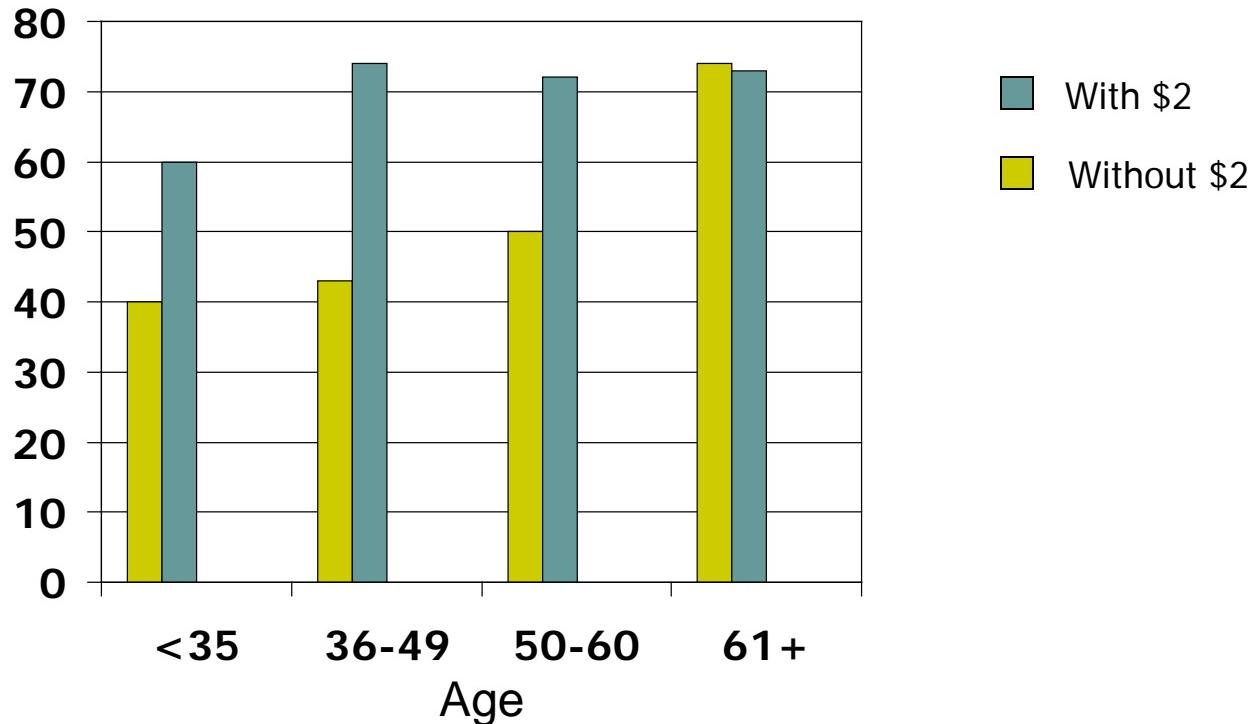
Incentive	1 <sup>st</sup> Mailing (%)	2 <sup>nd</sup> Mailing (%)	3 <sup>rd</sup> Mailing (%)	4 <sup>th</sup> Mailing (%)
No incentive	20.7	36.7	46.7	52.0
\$1 Cash	40.7	52.0	61.3	64.0
\$5 Cash	48.7	60.7	66.7	71.3
\$5 Check	52.0	62.7	66.7	67.3
\$10 Check	44.0	56.7	62.0	66.7
\$20 Check	54.0	70.7	75.3	79.3
\$40 Check	54.0	63.3	66.0	69.3
Promise of \$50	23.3	43.3	53.3	56.7

Note: Each treatment group contained 150 subjects (James and Bolstein 1992)

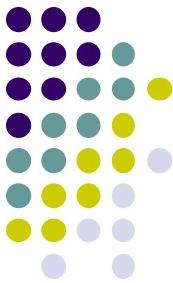


# Research finding: Pre-incentives are not just used to improve response rates; they reduce nonresponse error

Response rates by age and incentives for 1993 Survey of Washington State New Drivers License Holders



# Conclusions from research findings in the published literature (3)



- Coordinated contacts made in multiple ways (e.g. email, postal, Federal Express) can each have a significant positive effect on response.
- Multiple contacts are usually effective for improving response rates, but have diminishing returns with each use.
  - Implication: A fewer contact protocol, with stronger individual contacts may be better than many contacts, each of which is weaker.

# Conclusions from research findings in the published literature (4)



- Long questionnaires consistently obtain lower response and place an upper limit on response rates that can be achieved, even when compelling implementation methods are used.
- A foot-in-the-door approach of asking for an initial response (so people can understand what the questionnaire is about) is likely to produce better initial response rates than emphasizing up-front a requirement for many years of repeated responses.
- Long complicated consent and confidentiality forms are likely to limit response rates.
  - One effect of these requirements may be reflected in the finding that 19% (632 of 3413) of the early respondents dropped out part-way through the Family Study questionnaire and about 28% of those drop outs occurred in the consent/confidentiality section.



## Conclusions from research findings in the published literature (5)

- Appeals from government agencies and employers produce higher response rates than do approaches from other organizations.
- Direct appeals to individuals are more effective for obtaining higher response rates, than is depending upon referrals from someone else.
- Repeating the same appeals over and over is less effective than changing the nature of each appeal for a response.

# How might these experiences and research findings be linked together to develop a more effective data collection system? (1)

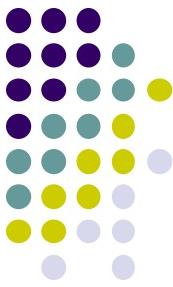


- Some structural constraints may be difficult to change, e.g. length of the questionnaire.
- However, other structural constraints may be subject to modification.
  - Provide a clearer identity with Department of Defense than was previously accomplished, e.g. use a “.mil” address instead of a “.org” return address.
  - Present the consent and confidentiality requirements in a less imposing way.

# How might these experiences and research findings be linked together to develop a more effective data collection system? (2)

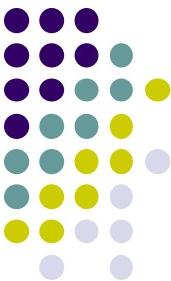


- Multiple modes of contact (postal + email + fed ex)
- Multiple response options (paper + web)
- Pre-incentives with request
- Change mail-out packet to encourage opening, e.g. DoD+ envelope + weight.
- Focus on nonresponse error instead of response rates only.
- Fewer more powerful contacts



# A small digression

- Here are results from some studies of “hard to survey” populations, the general public.
- Please think with me for a few minutes about how elements of implementation are precisely specified, and how each makes a difference.



# Perspective on setting expectations for what is possible—a digression

- Household surveys typically obtain the lowest response rates.
- Telephone only and email-contact only surveys typically obtain responses in low teens or less.
- A postal contact strategy that pushes to the web while temporarily withholding mail has been shown to consistently produce responses of 40% or higher.
- Here are some results from multiple tests of such a strategy that may help establish the possibilities for Military Member and Family Study.



# Five household studies were conducted, 2007-2012

- **Lewiston, ID-Clarkston WA Regional Study** 2007
- **Washington Community Survey** 2008
- **Washington Economic Survey** 2009
- **WA, PA, AL Tri-state electricity Survey** 2011
- **WA and NE Water Management Survey** 2012
- Burden
  - 20-25 minute surveys
  - 12 page questionnaires (in paper)
  - 90-140 individual responses required
- Implementation strategy –postal contact only to addresses
  - Wk 1. Request for web or mail response, included \$4-\$5
  - Wk 2. Thank you/reminder
  - Wk 5. Repeated request, 0-\$5 incentive a second time.
  - Wk 7. Final contact



# We tailored our design to the survey topic and location

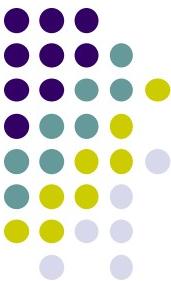
- Use of pictures of location to be surveyed
- Creation of common screens for mail and web
- Use of common branding for mail and web
- Choice of stationary, envelopes and content based upon rethinking of personalization strategies given that names could not be used
- Unified-mode construction for mail and web



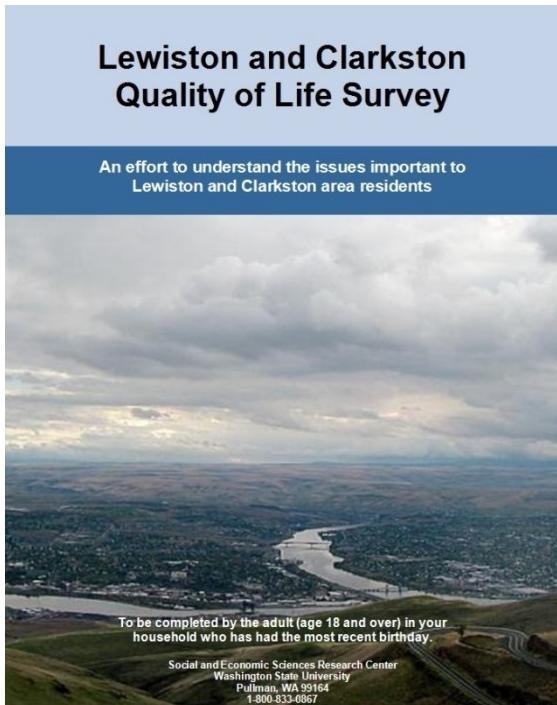
# Tailoring/personalizing the survey to the location and population

- Photos taken of local landmarks, artwork, and symbols to make survey recognizable and visually attractive





# For example, consider the cover and back page of the mail questionnaire



Q1. Approximately how many years have you lived in the Lewiston-Clarkston area?  
 Years

Q2. Overall, how satisfied are you with living in this area?  
 Very satisfied  
 Somewhat satisfied  
 Neutral  
 Somewhat dissatisfied  
 Very dissatisfied  
 Not sure

Q3. How attached do you feel to the Lewiston-Clarkston area?  
 Very attached  
 Somewhat attached  
 Slightly attached  
 Not at all attached  
 Not sure

Q4. During the past five years, how much better or worse do you think Lewiston-Clarkston has become as a place to live?  
 A lot better  
 Somewhat better  
 No change  
 Somewhat worse  
 A lot worse  
 Not sure

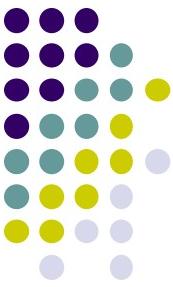
Q5. How much better or worse do you think the local economy has become in the past five years?  
 A lot better  
 Somewhat better  
 No change  
 Somewhat worse  
 A lot worse  
 Not sure

Q6. How much better or worse do you think the area's natural environment has become in the past five years?  
 A lot better  
 Somewhat better  
 No change  
 Somewhat worse  
 A lot worse  
 Not sure



Thanks again for completing this survey!  
If you have any additional thoughts about any of the above topics or the survey itself, please share them here.

Social and Economic Sciences Research Center  
Washington State University  
PO Box 641801  
Pullman, WA 99164-1801



# Consider the opening page of the web questionnaire

Lewiston and Clarkston  
**Quality of Life Survey**

*An effort to understand the issues important to Lewiston and Clarkston area residents*



Hello,

Welcome to the 2007 Lewiston and Clarkston Quality of Life Survey. Your household if part of a sample of Lewiston and Clarkston residential addresses randomly selected to participate in the study. The purpose of the survey is to discover more about how residents are being affected by a variety of things from the availability of jobs and healthcare to the use of cell phones.

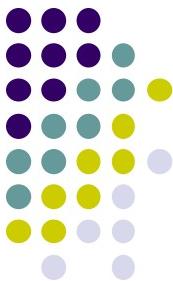
Please take just a few minutes to complete this survey by entering in the box below the Personal Access Code we mailed to you .

This study has been reviewed and approved by the WSU Institutional Review Board for human subject participation. If you have questions about the study please contact Thom Allen at [ted@wsu.edu](mailto:ted@wsu.edu). If you have questions about your rights as a participant please contact the WSU IRB at 509-335-3668 or [irb@wsu.edu](mailto:irb@wsu.edu).

Please, enter your Access Code listed in the letter we sent to you:

Special thanks to Will Simpson and PalousePhotography.org for the photo used above.

# Design of the web survey—focus on population not sponsor



## Example: Question 2

- Similar design format to paper survey, and use of familiar image in upper left-hand corner of the screen.

Lewiston and Clarkston  
**Quality of Life Survey**

Question 2 of 51

**Overall, how satisfied are you with living in this area?**

Very satisfied  
 Somewhat satisfied  
 Neutral  
 Somewhat dissatisfied  
 Very dissatisfied  
 Not sure

[Next >>](#) [<< Back](#)

# We used a unified design between mail (on left) and web (on right)

Q1. Approximately how many years have you lived in the Lewiston-Clarkston area?

 Years

Q2. Overall, how satisfied are you with living in this area?

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Neutral
- 4 Somewhat dissatisfied
- 5 Very dissatisfied
- 6 Not sure

Q3. How attached do you feel to the Lewiston-Clarkston area?

- 1 Very attached
- 2 Somewhat attached
- 3 Slightly attached
- 4 Not at all attached
- 5 Not sure

Q4. During the past five years, how much better or worse do you think Lewiston-Clarkston has become as a place to live?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

Q5. How much better or worse do you think the local economy has become in the past five years?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

Q6. How much better or worse do you think the area's natural environment has become in the past five years?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

Question 1 of 51

Approximately how many years have you lived in the Lewiston-Clarkston area?

 Years

[Next >>](#)

[<< Back](#)

Question 2 of 51

Overall, how satisfied are you with living in this area?

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Neutral
- 4 Somewhat dissatisfied
- 5 Very dissatisfied
- 6 Not sure

[Next >>](#)

[<< Back](#)

Question 3 of 51

How attached do you feel to the Lewiston-Clarkston area?

- 1 Very attached
- 2 Somewhat attached
- 3 Slightly attached
- 4 Not at all attached
- 5 Not sure

[Next >>](#)

[<< Back](#)

Question 4 of 51

During the past five years, how much better or worse do you think Lewiston-Clarkston has become as a place to live?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

[Next >>](#)

[<< Back](#)

Question 5 of 51

How much better or worse do you think the local economy has become in the past five years?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

[Next >>](#)

[<< Back](#)

Question 6 of 51

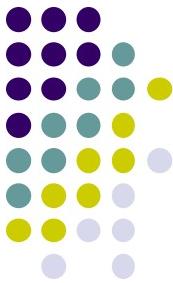
How much better or worse do you think the area's natural environment has become in the past five years?

- 1 A lot better
- 2 Somewhat better
- 3 No change
- 4 Somewhat worse
- 5 A lot worse
- 6 Not sure

[Next >>](#)

[<< Back](#)

# Personalized Correspondence



- All letters used WSU stationary
- Photo of questionnaire cover used to tie different elements together

**Washington State University**

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Social and Economic Sciences Research Center  
Wilson Hall 133; PO Box 644014  
Pullman, WA 99164-4014  
509-335-1511  
Fax 509-335-0116

October 8, 2007

<CITY> Area Resident  
<ADDRESS>  
<CITY>, <STATE> <ZIP-ZIP4>

Dear <CITY> Area Resident,

I am writing to ask for your help in understanding the quality of life in the Lewiston/Clarkston area and how residents are being affected by a variety of things from the availability of jobs and healthcare to the use of cell phones. The best way we have of learning about these issues is by asking all different kinds of people who live in the area to share their thoughts and opinions. Your address is one of only a small number that have been randomly selected to help in this study.

To help us make sure we hear from all different types of people who live in the area, please have the adult (age 18 or over) in your household who has had the most recent birthday be the one to complete the enclosed questionnaire.

The questions should only take about 15 minutes to complete. Your responses are voluntary and will be kept confidential. Your names are not on our mailing list, and no one's answers will ever be associated with the mailing address. If you have any questions about this survey of Lewiston/Clarkston area residents, please call Thom Allen, the study director, by telephone at 509-335-1511 or by email at [sesrc@wsu.edu](mailto:sesrc@wsu.edu). This study has been reviewed and approved by the Washington State University Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at 509-335-3668.

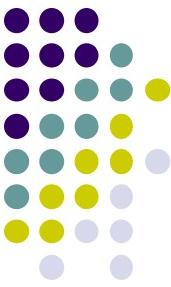
By taking a few minutes to share your thoughts and opinions about life in the Lewiston-Clarkston area you will be helping us out a great deal, and a small token of appreciation is enclosed as a way of saying thank you.

I hope you enjoy completing the questionnaire and look forward to receiving your responses.

Many Thanks,

Don A. Dillman  
Regents Professor and Deputy Director

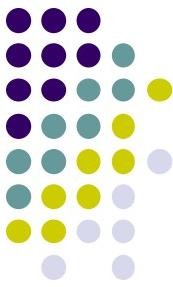




# Exterior of Envelopes (2<sup>nd</sup> and 4<sup>th</sup> Contacts)

- Used WSU address labels
- Used a return label showing the photo from survey cover and the survey title to increase familiarity

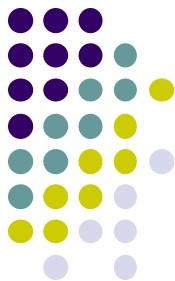




# We compared four treatments

1. Mail preference, mention web early: Send mail questionnaire and mention web with initial request
2. Mail preference, mention web later: Send mail questionnaire but withhold mention of web for about two weeks
3. Web preference (web+mail): Web invitation with no mail questionnaire, but explain that mail questionnaire will be sent in about two weeks
4. Equal preference: It is your choice!

# Initial withholding of mail drove 41% to the web!

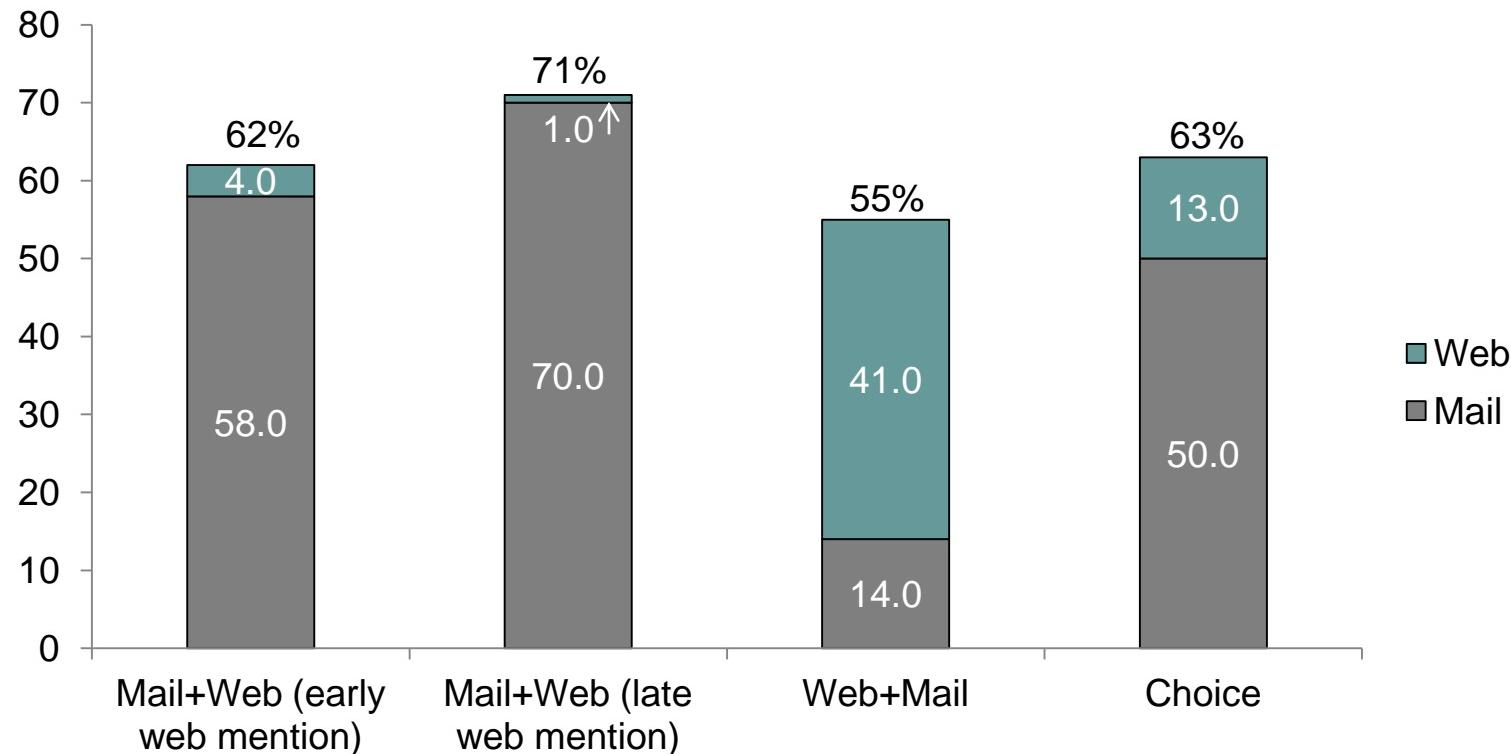


<u>Treatments</u>	<u>Web (%)</u>	<u>Paper (%)</u>	<u>Total (%)</u>
Mail preference (mention web early)	4	58	62
Mail preference (mention web later)	1	70	71
<b>Web preference (web+mail)</b>	<b>41</b>	<b>14</b>	<b>55</b>
Equal preference (choice)	13	50	63



# Mail+web and choice designs achieved higher response rates than web+mail, but obtained few web responses

- When given the initial choice of web vs. mail, few respondents chose web



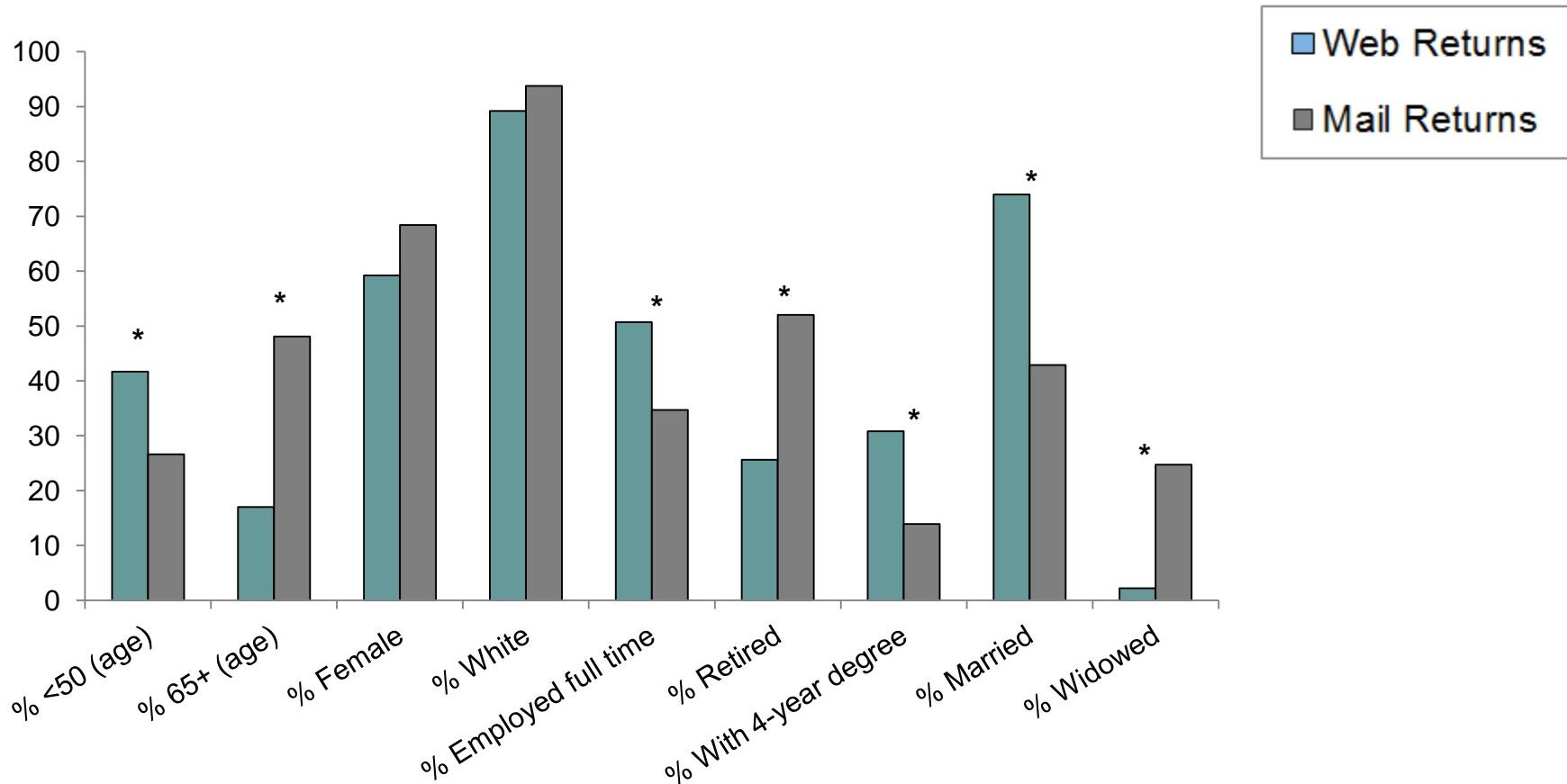
# Moving from thinking about response rates to thinking about nonresponse error



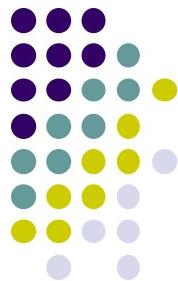
- It does not help much to improve response rates if our respondents are different from non-respondents on variables important to the study objectives
- Thus, we need to compare respondent characteristics on web vs. mail within the different treatment groups



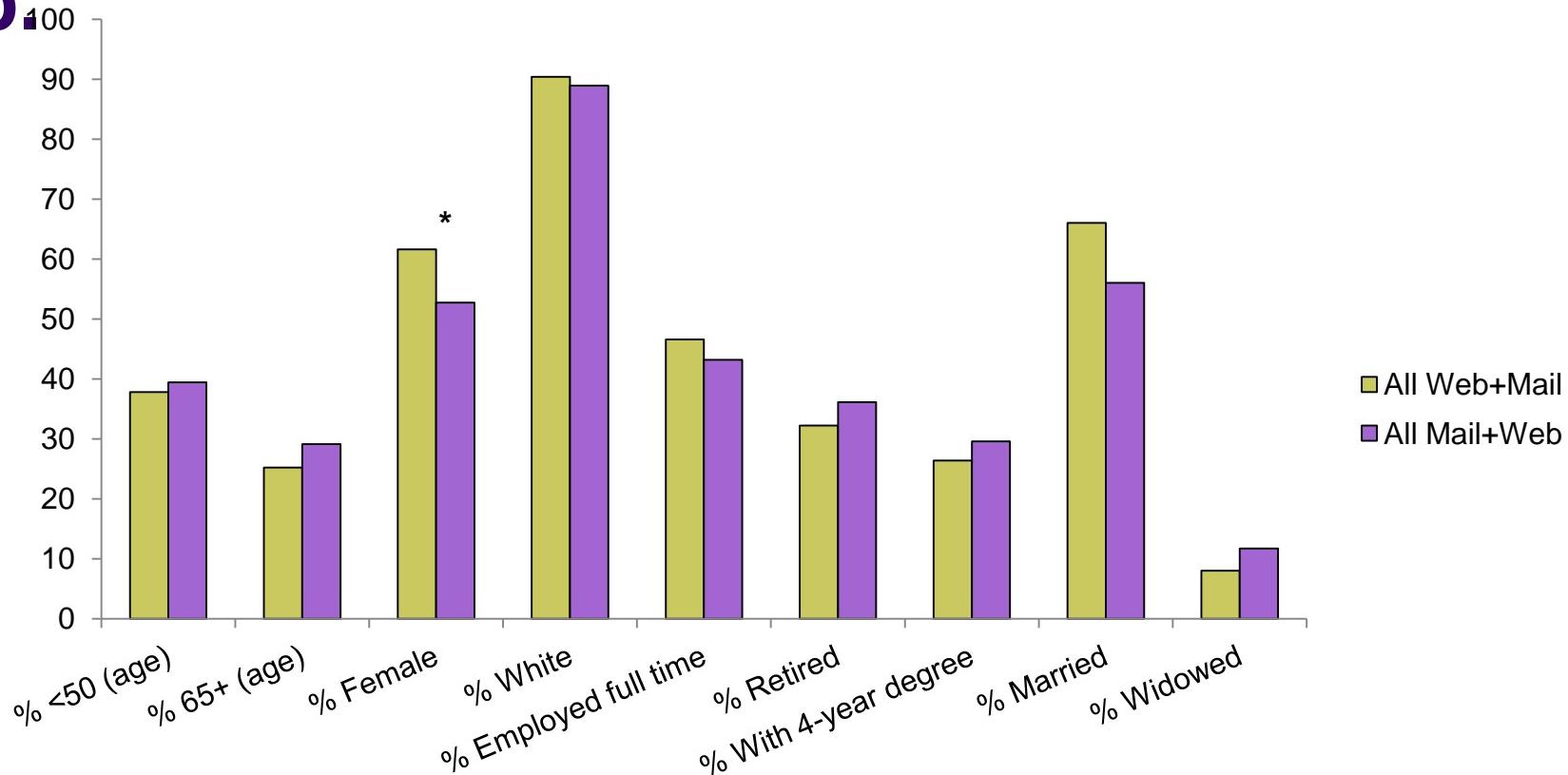
# In the **web+mail** group, web and mail respondents were quite different on demographics



\*  $p \leq .05$



But the complete **web+mail** group (all respondents) was quite similar to the combined **mail+web** (nearly all mail) group; mail works for those who prefer web.



\* p ≤ .05



# In 2009 the Washington Economic Survey provided another test of the basic model

- Example of the mail version:

**Are You Better or Worse Off Than A Year Ago?**

A study of how households throughout Washington may have been affected by changes in the economy.



To be completed by an adult at this address with knowledge of the household's economic situation since September 2008.

Social and Economic Sciences Research Center  
Washington State University  
Pullman, WA 99164  
1-800-833-0867

**Washington Economic Survey**

Q14. How long has your household lived at your current residence?

Over one year → Skip to Q15  
 Over one year to five years → Skip to Q15  
 One year or less

→ Q14a. (If one year or less) were each of the following a reason for moving to your current residence during the past year?

A. Purchased your current residence      No      Yes  
 A foreclosure on your previous residence        
 Could not afford rent or mortgage at your previous residence     

Q15. Do you think that your household's overall total income during 2009 will be:

A lot more than in 2008  
 A little more than in 2008  
 About the same as in 2008  
 A little less than in 2008  
 A lot less than in 2008

Q16. Compared to one year ago, has the amount of income that your household saves each month:

Increased a lot  
 Increased a little  
 Stayed about the same  
 Decreased a little  
 Decreased a lot  
 Does not apply, my household has not saved any income in over a year

Q17. During the past year, has the overall value of your household's retirement savings:

Increased a lot  
 Increased a little  
 Stayed about the same  
 Decreased a little  
 Decreased a lot  
 Does not apply, my household has not had retirement savings during the past year

Q18. To what extent are you concerned that members of your household will be unable to afford to retire when planned?

Very concerned  
 Somewhat concerned  
 A little concerned  
 Not at all concerned  
 Does not apply, all members of my household are currently retired



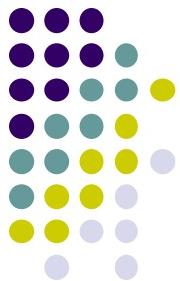
Thanks again for completing this survey!

If you would like to clarify any of your answers, or share additional thoughts about how your household has been affected during this last year by changes in the economy, please do that here.

Social and Economic Sciences Research Center  
Washington State University  
PO Box 641801  
Pullman, WA 99164-1801

# The 2011 Tri-State Electricity Survey

## Provide additional state tests



- Examples of the mail covers:

### How Will Alabama's Future Electricity Needs Be Met?

A survey of what residents think should and should not be done to meet growing future electricity needs across the state.

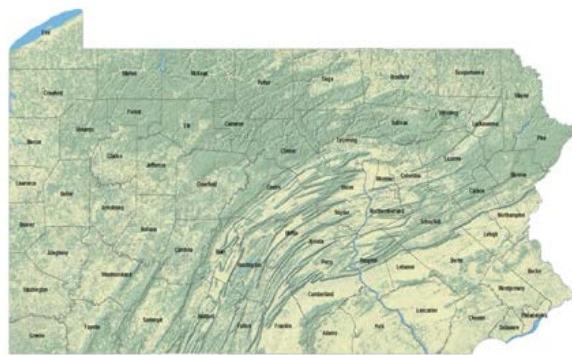


To be completed by the adult (age 18 and older) in your household who has had the most recent birthday.

Social and Economic Sciences Research Center  
Washington State University  
Pullman, WA 99164  
1-800-833-0867

### How Will Pennsylvania's Future Electricity Needs Be Met?

A survey of what residents think should and should not be done to meet growing future electricity needs across the state.



To be completed by the adult (age 18 and older) in your household who has had the most recent birthday.

Social and Economic Sciences Research Center  
Washington State University  
Pullman, WA 99164  
1-800-833-0867

### How Will Washington's Future Electricity Needs Be Met?

A survey of what residents think should and should not be done to meet growing future electricity needs across the state.



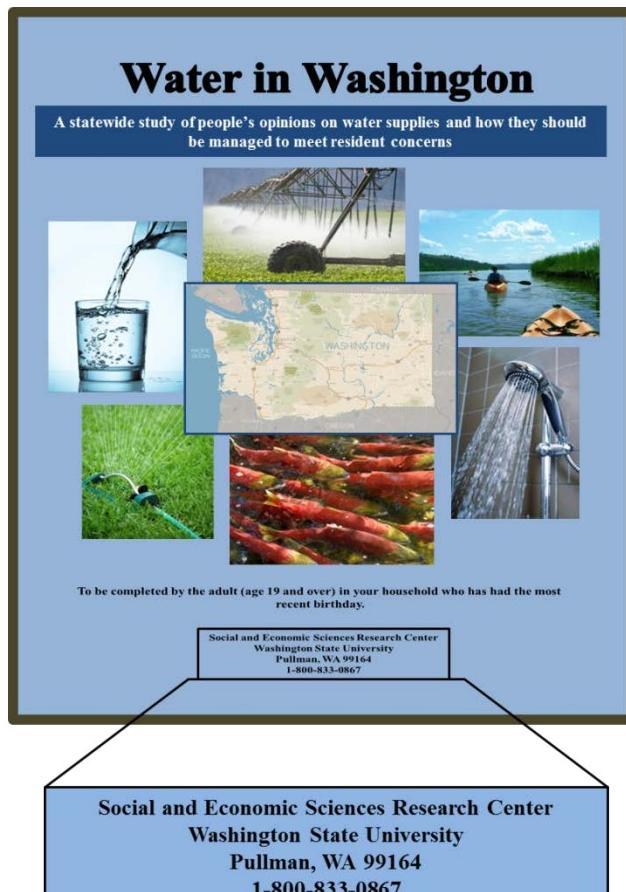
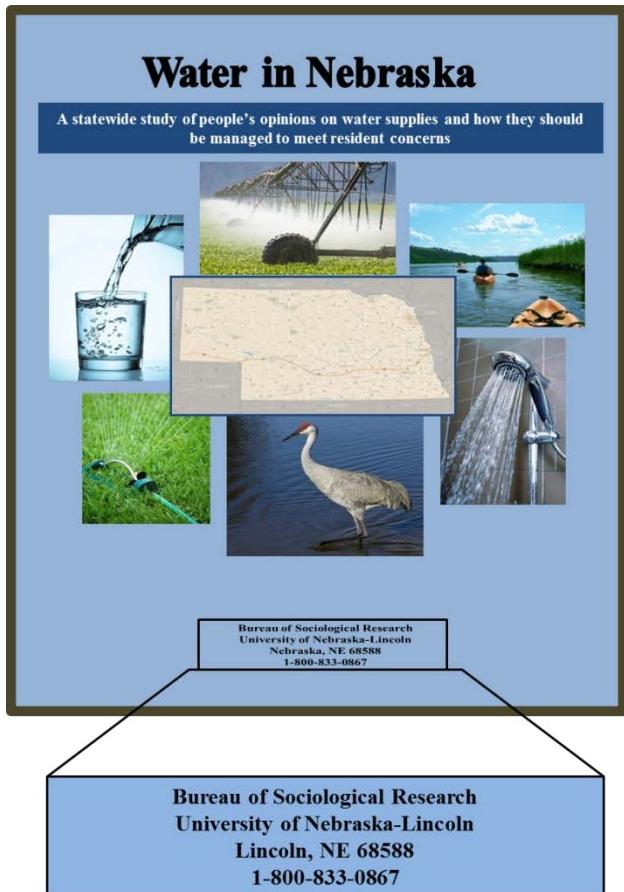
To be completed by the adult (age 18 and older) in your household who has had the most recent birthday.

Social and Economic Sciences Research Center  
Washington State University  
Pullman, WA 99164  
1-800-833-0867

# The 2012 NE/WA Water Management Survey provided the final test of the model



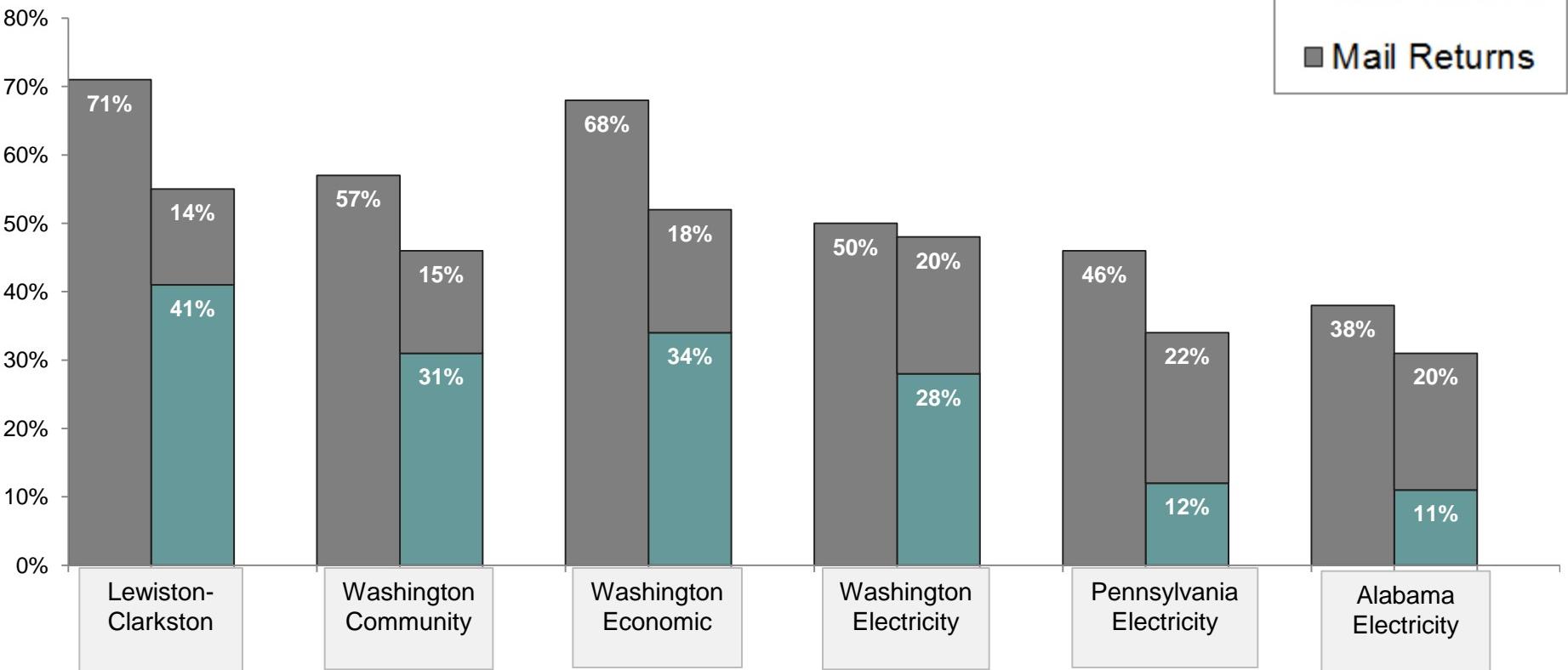
- Examples of the mail covers:





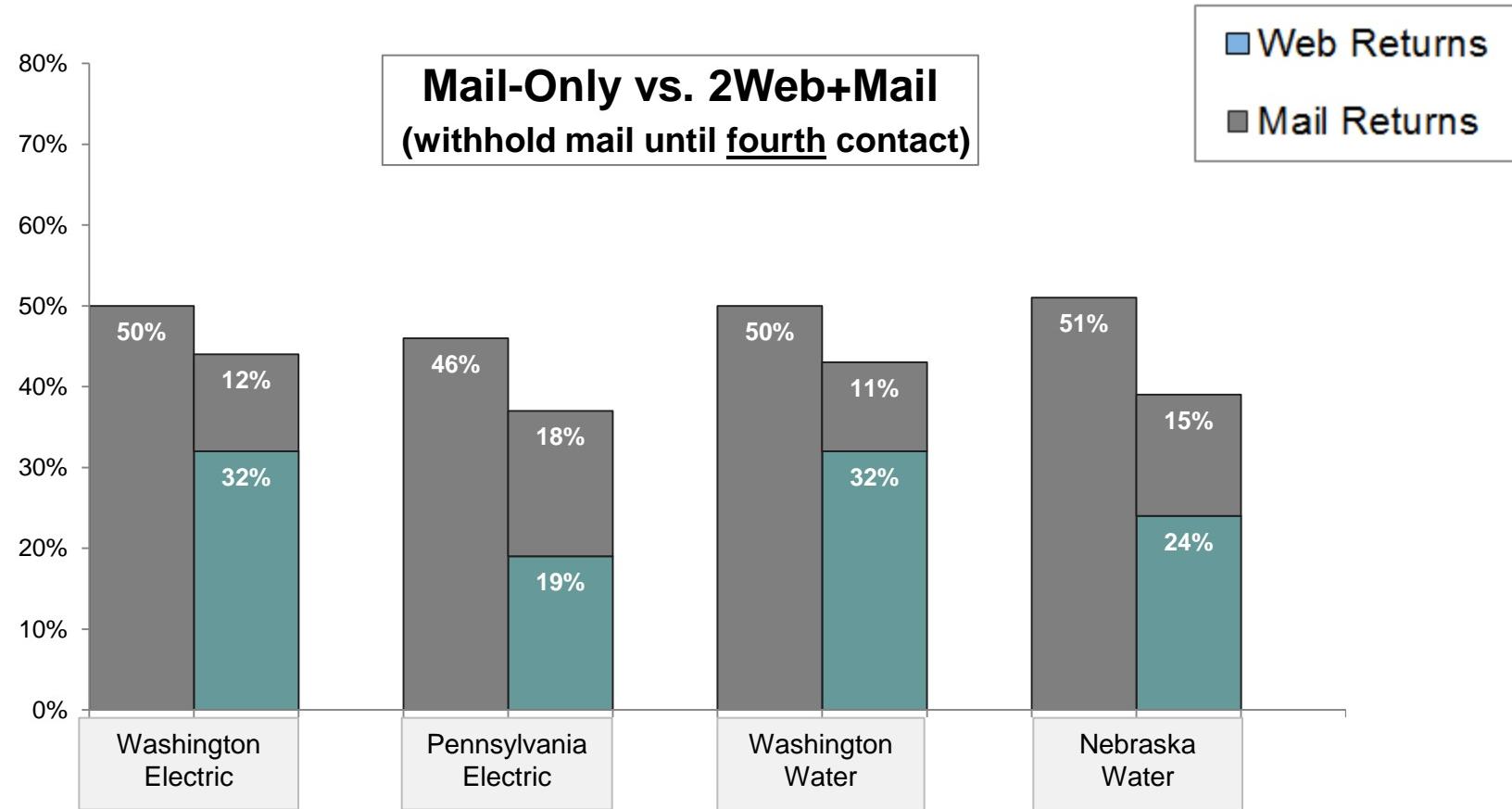
# Response rates for all tests of withholding paper until third of four contacts conducted by Washington State University, conducted 2007-2012

**Response Rates for Mail-Only vs. a Web+Mail  
(withhold mail from first two contacts)**





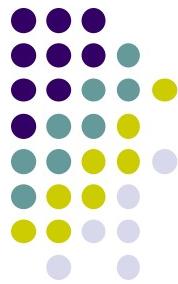
# Response rates for stronger web push tests—mail option withheld until last of four contacts vs. mail-only conducted by Washington State University, 2011-2012



# Selected findings from the five household studies



- 1 Mean response rates of 53% across 10 postal-only treatments.
- 2 Response rates of 43% when mail questionnaire withheld to third contact (web+mail) or fourth contact (2web+mail).
- 3 There are significant differences between web and mail respondents (education, age, income, marital status).
- 4 Demographically, the web+mail treatment respondents are similar to mail-only respondents.
- 5 A web+mail approach results in an average of about 62% of responses coming in over the web.



# Transitioning back to the Millennium Cohort Family Study

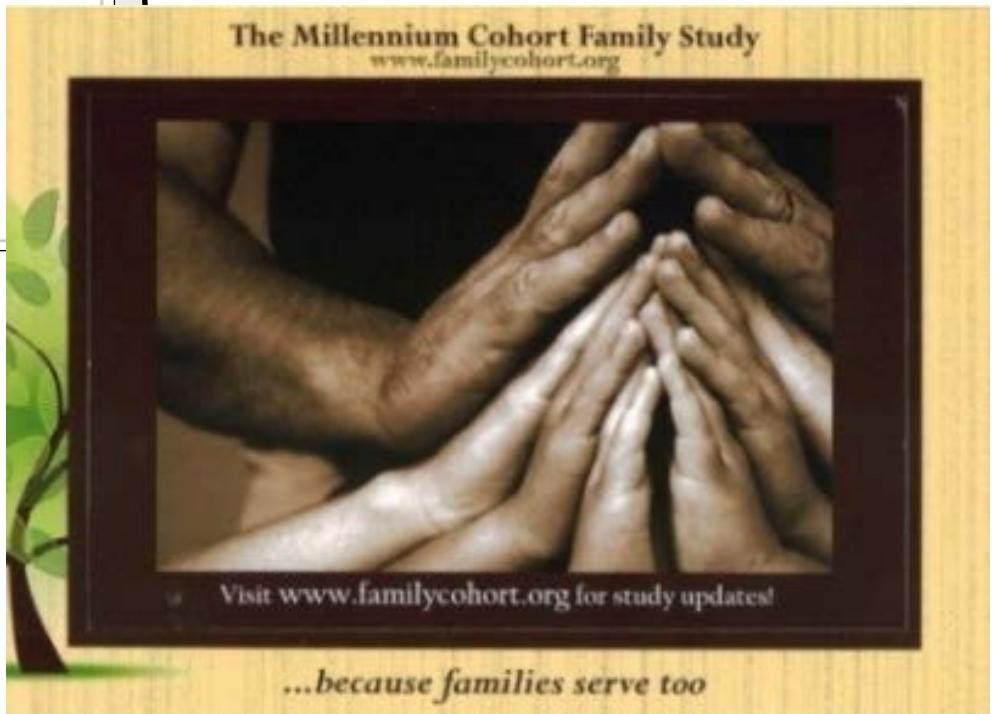
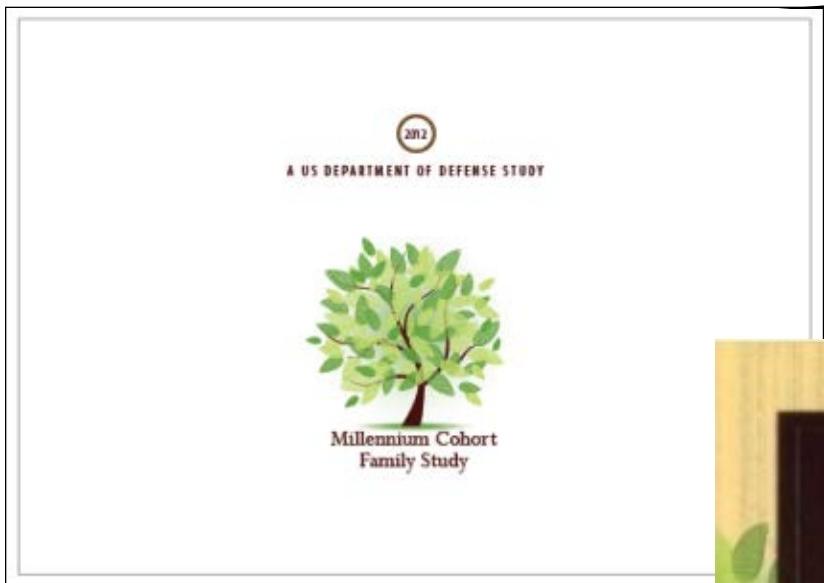
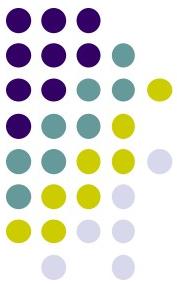
- If we can make a four contact strategy contact strategy produce 40+% response rates with nearly 2/3 of the responses coming via web, what can we do with a questionnaire 3x as long with a military member spouse population?
- We designed a strategy within the length, consent form, topic area constraints given to us using a mail-only (no email addresses available) contact strategy.
- In late 2013 a test of two feasible strategies was devised.
  - A web push strategy, using mail as a supplement
  - A mail push strategy, using web as a supplement

# The 2012 Experiment We Developed

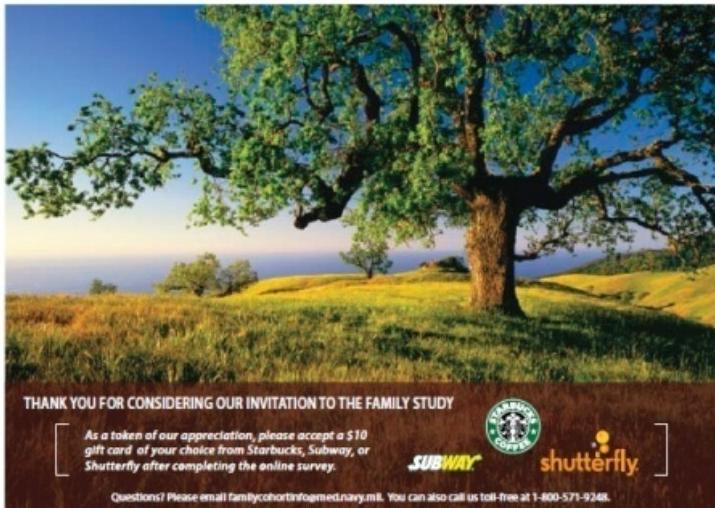
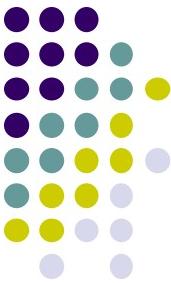


- 4955 Un-referred spouses accumulated from previous year—no email addresses, only postal.
- ½ in Group A: Used procedures that gave significant increment of response in referred sample, plus some literature based concepts.
  - Week 1: Magnet picture frame incentive and card; prose connects to spouse and weight helps get it open. Pushed to the web
  - Week 2: Postcard reminder: “Last week I mailed a request to you...” and why.
  - Week 5: Letter plus sample of questions and \$5 gift card
  - Week 6: Letter reminder
  - Week 9: FedEx (or USPS Priority) to get “different delivery method”
  - Week 10: Postcard reminder
- ½ in Group B: The same contacts, except...
  - Paper questionnaire sent in week 1, week 5, and week 9

# Mailing A1: Card with Magnet



# Mailing A2: Postcard

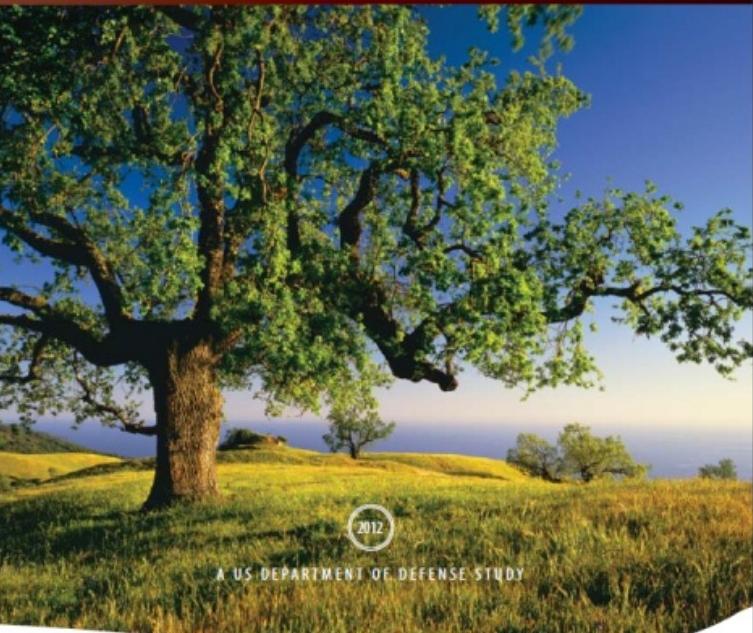


# Mailing A3: Sample Survey & \$5 Pre-incentive



**BECAUSE FAMILIES SERVE TOO**

A STUDY OF HOW MILITARY SERVICE MAY AFFECT THE HEALTH AND WELL-BEING OF MILITARY FAMILIES



2012

A US DEPARTMENT OF DEFENSE STUDY

GO TO: [WWW.FAMILYCOHORT.ORG](http://WWW.FAMILYCOHORT.ORG)

CLICK: "START SURVEY"

ENTER YOUR SUBJECT ID:



**WELL-BEING**

Now, we would like to ask you about your mental well-being. These questions are about how you feel and how things have been going over the last 4 weeks.

Over the last 4 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days
Feeling nervous, anxious, on edge, or worrying a lot about different things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling restless so that it is hard to sit still	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting tired very easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle tension, aches, or soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble falling asleep or staying asleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble concentrating on things, such as reading a book or watching TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming easily annoyed or irritable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next question

During the last 4 weeks, how much of the time:

	None of the time	A little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
Did you feel full of pep?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been a very nervous person?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt so down in the dumps that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How often in the last 4 weeks did you...

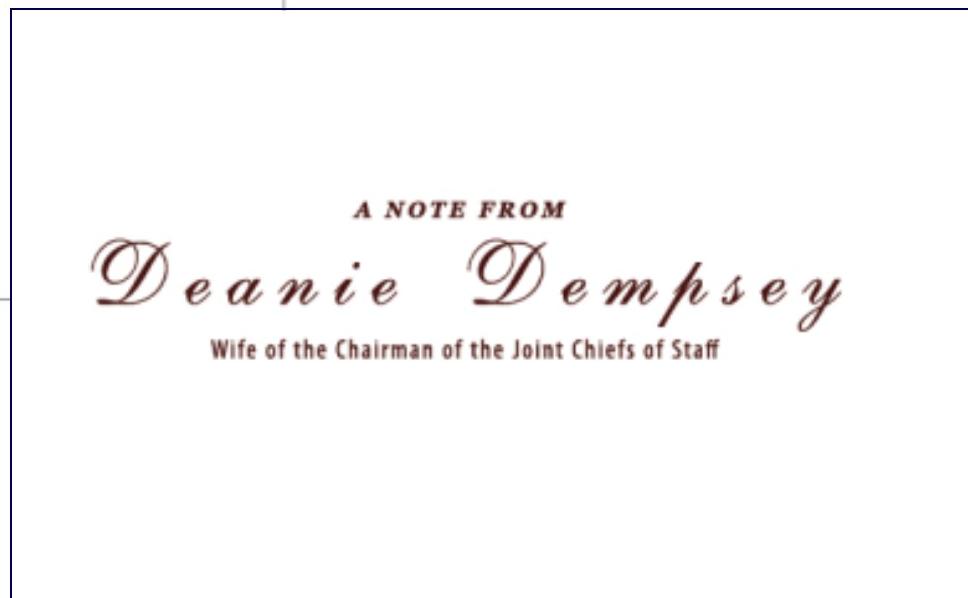
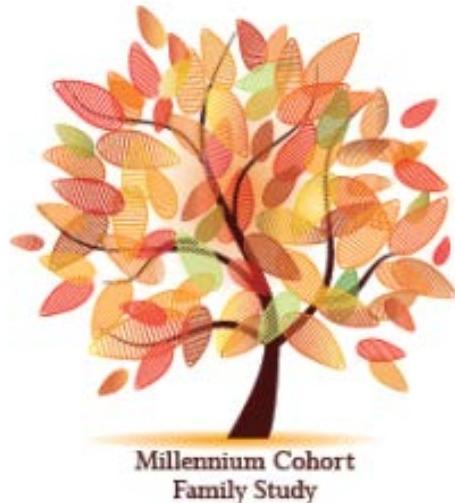
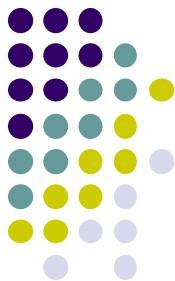
	Never	One Time	Two Times	Three or four times	Five or more times
Get angry at someone and yell or shout at them	<input type="radio"/>				
Get angry with someone and kick/smash something, slam the door, punch the wall, etc.	<input type="radio"/>				
Threaten someone with physical violence	<input type="radio"/>				
Cry persistently or uncontrollably	<input type="radio"/>				

SURVEY QUESTION EXAMPLES  
VISIT [WWW.FAMILYCOHORT.ORG](http://WWW.FAMILYCOHORT.ORG) TO COMPLETE YOUR SURVEY  
Page 3

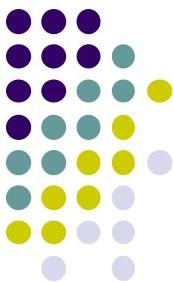


\$5

# Mailing A4: Card with Endorsement Letter



# Mailing A5: Survey sent via Fedex or Priority Mail



**BECAUSE FAMILIES SERVE TOO**

A STUDY OF HOW MILITARY SERVICE MAY AFFECT THE HEALTH AND WELL-BEING OF MILITARY FAMILIES

An illustration of a stylized tree with a brown trunk and green leaves. Ten circular frames are attached to the branches, each containing a photograph of a military family member, such as a soldier with a child or a couple.

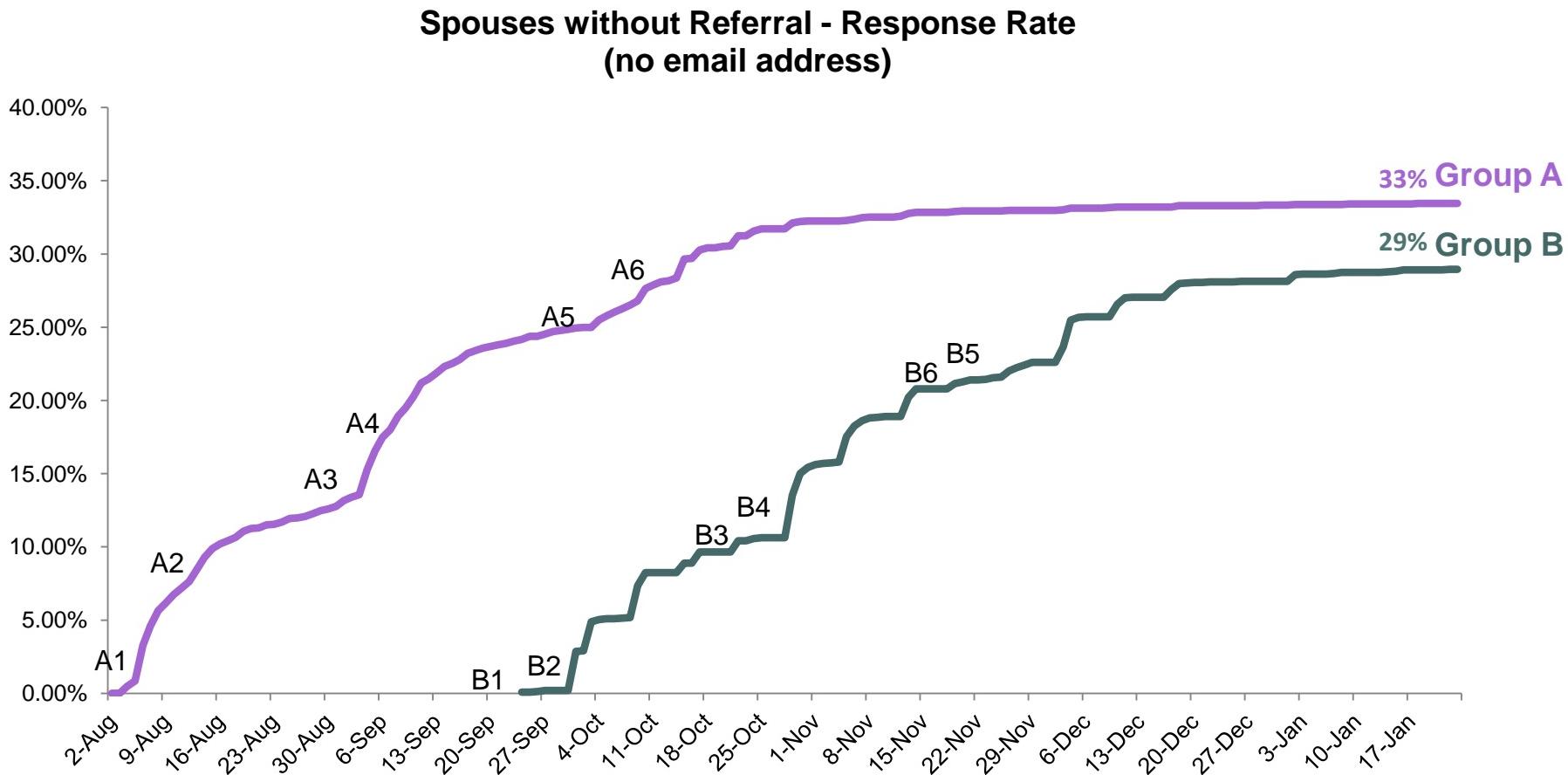
PLEASE COMPLETE THIS  
SURVEY AND RETURN IT IN  
THE PRE-PAID ENVELOPE

OR      GO TO [WWW.FAMILYCOHORT.ORG](http://WWW.FAMILYCOHORT.ORG)  
CLICK "START SURVEY"  
ENTER YOUR SUBJECT ID:





# Push to the web (Group A) slightly out-performed push to paper (Group B)



# Conclusions from 2012 experiment (1)



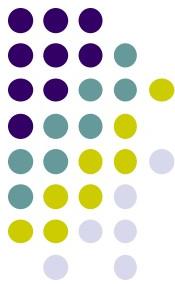
- Response rates similar for groups A and B, but the push to web worked better than immediate push to paper. (Qualification: paper push occurred later in the year, nearer holidays, and last two mailings were unintentionally reversed. That may have reduced response slightly to Group B).
- Each of the six contacts had a demonstrable positive effect on response rates. Thus, each seemed to contribute importantly to overall response.

# Conclusions from 2012 experiment (2)

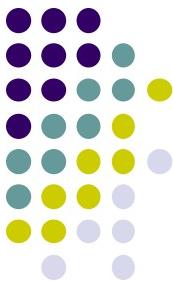


- 1/3 of Group A spouses responded within 2 ½ months.
- These spouses were not referred or contacted in a time sensitive manner (soon after military spouse responded), which probably lowered response.
- Only 14% in the web push group (A) responded by paper, compared to 94% by web. (Web response avoids data entry costs.)
- Conclusion; We can use postal in support role to push people to the web. Delivery of the sample questions and Fed Ex with paper questionnaire improved response significantly.
- We do not yet know about any changes in non-response error.

# Implications for future data collection



- There are three possibilities for applying results from this work.
  - Collection of longitudinal data from Panel 4 spouses
  - Collection of data from new Panel 5 cohort of military members
  - Collection of data from spouses of the new Panel 5 cohort
- The success of any additional family cohorts starts with getting responses from the military members, so this should be the first focus.
- Each of these three groups requires somewhat different thinking.



## Use implications for longitudinal collection of data from Panel 4 spouses

- Should not simply replicate methods already used.
- Thank respondents for previous response and provide results on uses. Maintain contact.
- Use new and different pre-incentives.
- Similarly concentrate on getting responses quickly as in the Group A methods.
- Be guided by the idea that less is more, i.e. fewer more powerful contacts rather than repetitive redundant concepts.

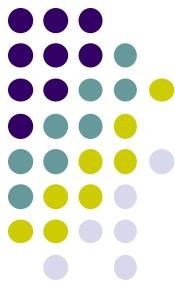
# Use implications for new Panel

## 5 Cohort of military members



- Obtaining a significantly higher response rate improves potential for Family Study response.
- Concepts tested for Family Cohort Group A have potential for getting higher response quicker and mostly by web,- e.g. magnet (or heavy) mail-out, token Starbucks or cash pre-incentive, early sample questions, Dempsey mailing, Fed Ex delivery of paper questionnaire.
- Email address availability gives email augmentation of paper contacts the potential for further improving response.
- Implementation concept needs to shift away from large number of redundant email contacts to fewer but carefully coordinated email/postal contacts.
- Include request for spousal contact information—email, postal, and telephone, rather than referral.

# Use implications for Panel 5 spousal contacts



- Use similar approach to that used for Panel 4 spouses.
  - If email and telephone numbers provided by military member, use implementation strategy that includes email augmentation.
  - If no email and telephone contact, use “un-referred” mail-only contact strategy.
- Coordinate more closely efforts to obtain military member and spousal responses. Doing this seems likely to improve spousal response rate.

# Additional long term suggestions for consideration

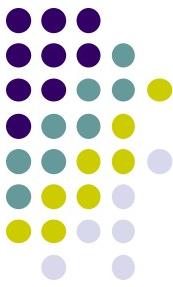


- Continue to work on reducing onerous nature of consent form, e.g. web is less onerous than paper; Web requires checking a box; paper requires a signature.
- Eliminate marketing site trappings, e.g. use of this phrase, “to unsubscribe....”
- Consider using differential incentives, e.g. \$10 cash pre-incentive for harder to convince respondents, e.g. no longer in military, less educated, lower military ranks.
- Consider reducing number of questions to about one-half of current amount, perhaps asking certain questions only every six years instead of three to reduce non-response error.

# How to increase response to MilCoh and FamCoh surveys

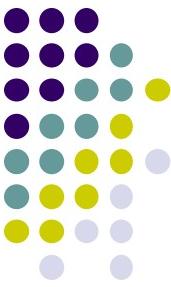


- One approach is to focus on reducing the heavy burden and break-offs
  - Length
  - Consent form requirements and initial 20+ year commitment
- Another approach
  - Significant cash pre-incentives, possibly with thank-you post incentives.
  - Shift away from trying to rely on email/web only; integrate postal contacts.
  - Shorter, more powerful implementation strategies.
- Some combination of the above approaches with a focus on optimizing results using a non-response error criterion



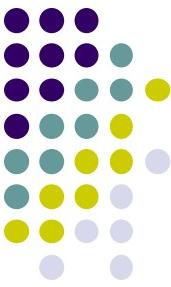
# Final thoughts

- I believe response can be improved significantly over that which has been achieved.
- There is no single technique, or “magic bullet” for doing that.
- But, a comprehensive design strategy with many specific changes offers promise.
- Need fewer, but more powerful individual contacts.



# Selected references

1. Smyth, J.D., Dillman, D.A., Christian, L.M., & O'Neill, A. (2010). "Using the Internet to survey small towns and communities: Limitations and possibilities in the early 21st century." American Behavioral Scientist 53: 1423-1448.
2. Dillman, D.A., Smyth, J.D., Christian, L.M. 2009. Internet, Mail and Mixed-Mode Surveys; The Tailored Design Method 3<sup>rd</sup> edition. John Wiley Co.
3. Messer, Benjamin L. and Don A. Dillman. 2011. "Surveying the General Public Over the Internet Using Address-Based Sampling and Mail Contact Procedures." Public Opinion Quarterly 75(3):429-57.



# Selected references, page 2

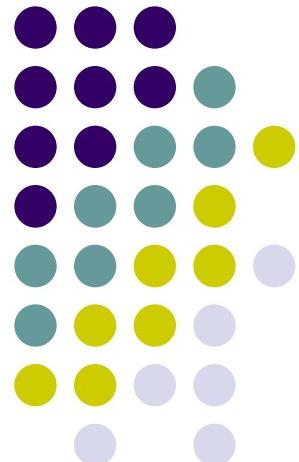
4. Messer, Benjamin L., Michelle L. Edwards, & Don A. Dillman. (2012). "Determinants of Web & Mail Item Nonresponse in Address-Based Samples of the General Public." Survey Practice, April:. <http://www.surveypractice.org>
5. Messer, Benjamin L. 2012. "Pushing households to the web: Results from Web+Mail experiments using address based samples of the general public and mail contact procedures." Ph.D. Dissertation. Washington State University, Pullman.
6. Edwards, Michelle L. 2013. "Measuring Public Perceptions of Water Governance in Nebraska and Washington." Ph.D. Dissertation. Washington State University, Pullman.

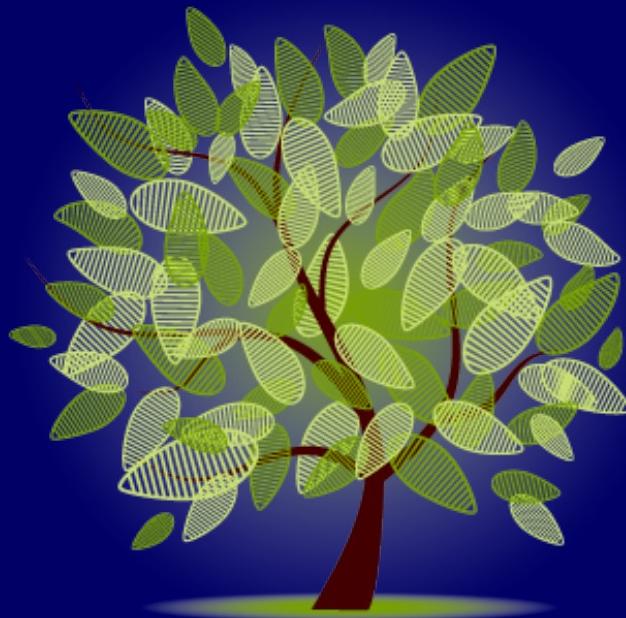
# Thank you!

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**Don A. Dillman, Washington State Univ. Social and  
Economic Sciences Research Center and Department  
of Sociology**

Contact: [dillman@wsu.edu](mailto:dillman@wsu.edu)  
<http://www.sesrc.wsu.edu/dillman/>





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**MILLENNIUM COHORT STUDY**

## Millennium Cohort Family Study

**Preliminary Data**

**Toni Rush, MPH**

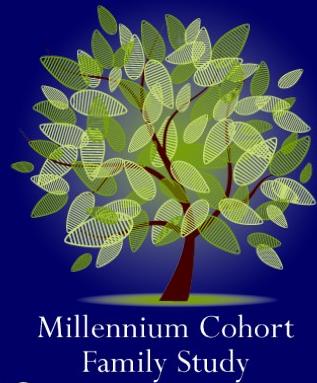


**Duke**  
UNIVERSITY



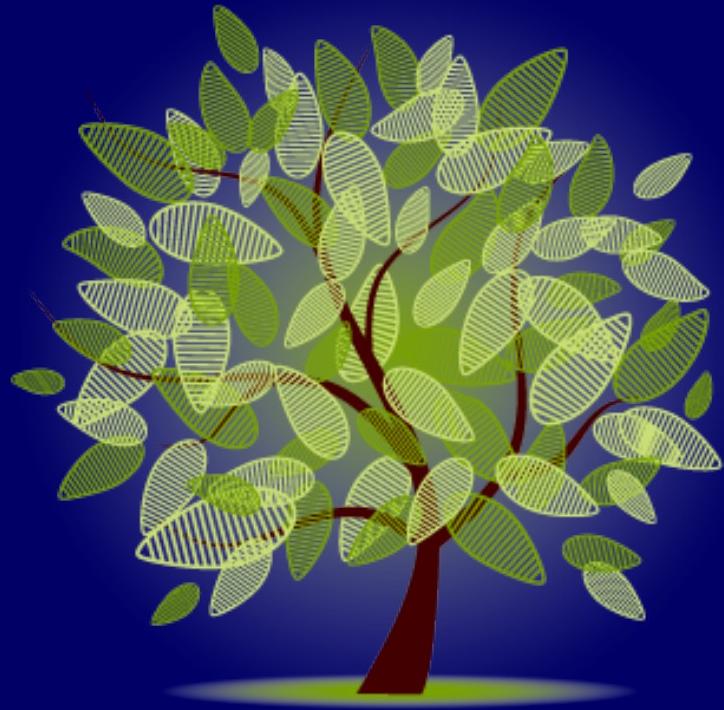
**NYU** School of Medicine

# Preliminary Data



- As of 05 March 2013, there were 7,500 responders who completed the web survey
  - 1,239 responders replied by paper survey
- Frequencies of missing responses were assessed for all variables
  - Less than 5% were missing for each variable
  - There were 48 (0.01%) participants that only completed the “Background” and “Demographic” sections
- Demographics and mental health characteristics continue to be similar by referral status





Millennium Cohort  
Family Study

## **Self-reported Family Data: Demographics**



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# Spouse Demographics



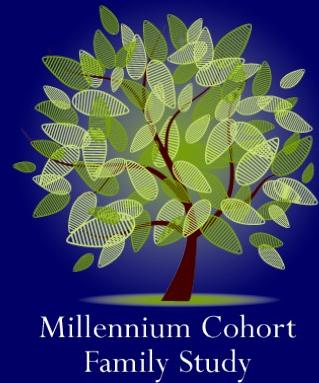
Millennium Cohort  
Family Study

- **88% of the population is female**
- **Race/Ethnicity:**
  - **79% of the population is non-Hispanic white**
  - **9% of the population is Hispanic**
  - **4% of the population is non-Hispanic black**
- **99% of the population is currently married**
  - **71% have been married  $\leq$  5 years**
  - **Mean years of marriage = 2.2 years ( $sd=0.8$ )**
- **74% (5,550/7,500) of sponsors have deployed since 2001**
- **49% (667/1,345) of spouses who ever served in the military have deployed since 2001**

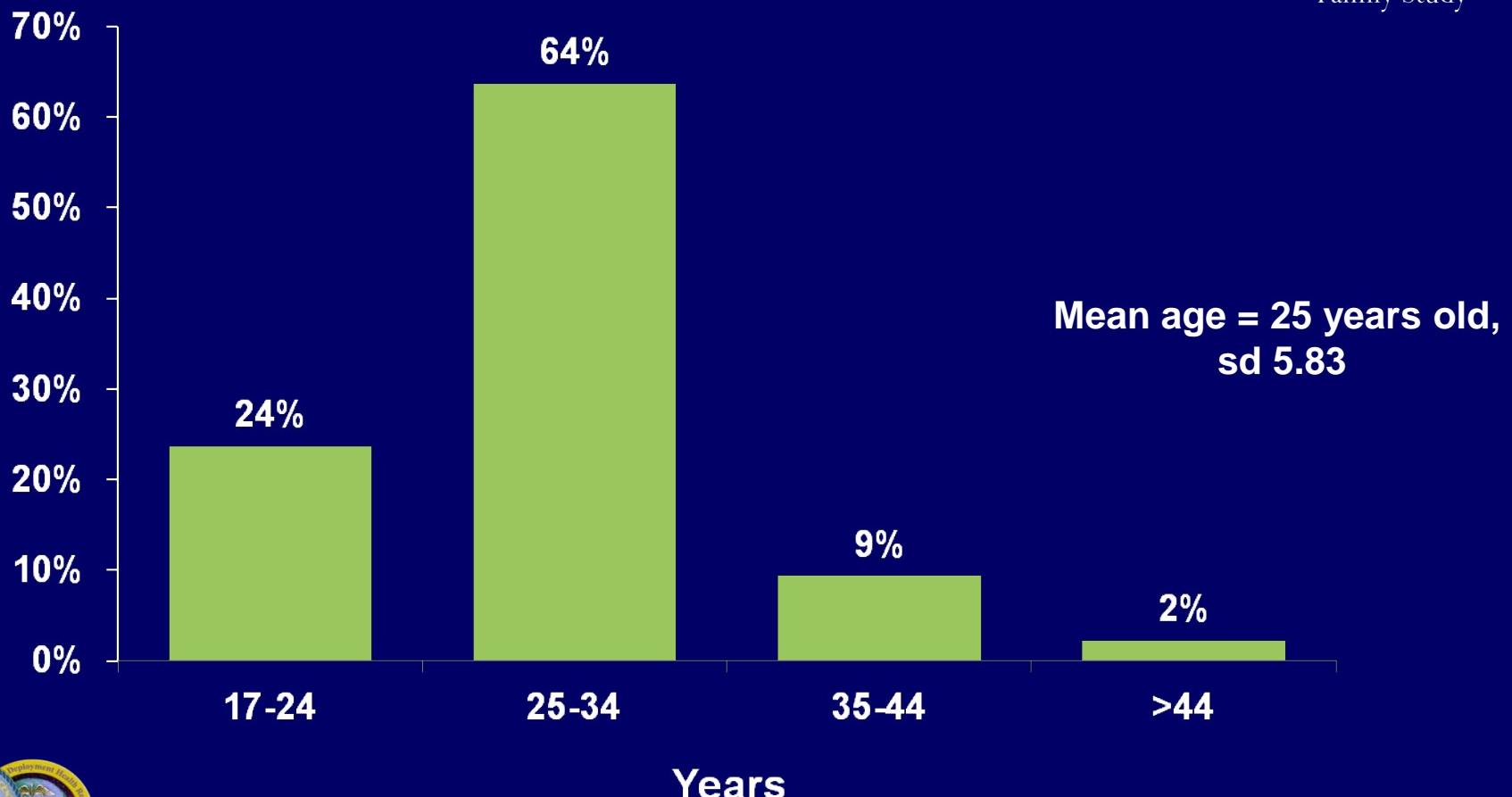


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# Spouse Demographics



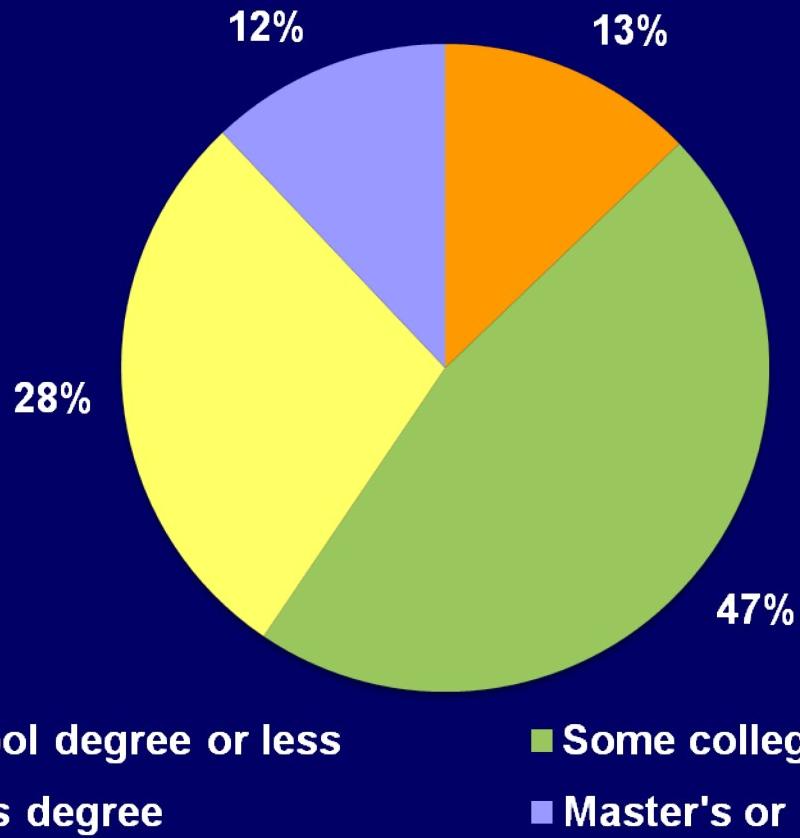
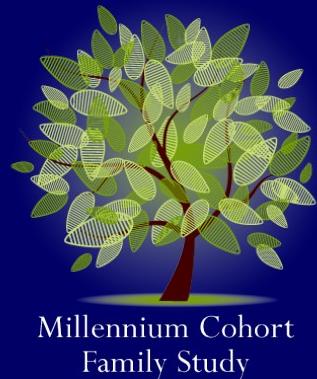
## Age



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# Spouse Demographics

## Highest Level of Education



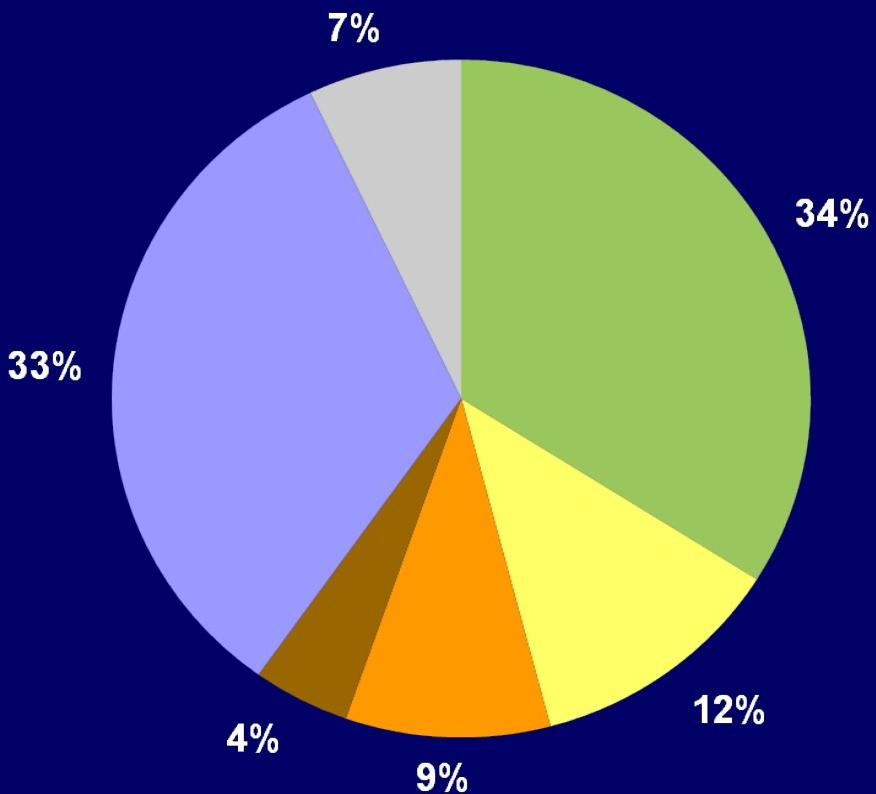
# Spouse Demographics



Millennium Cohort  
Family Study

## Employment Status

- Full-time
- Part-time
- Not employed, looking for work
- Not employed
- Homemaker
- Other



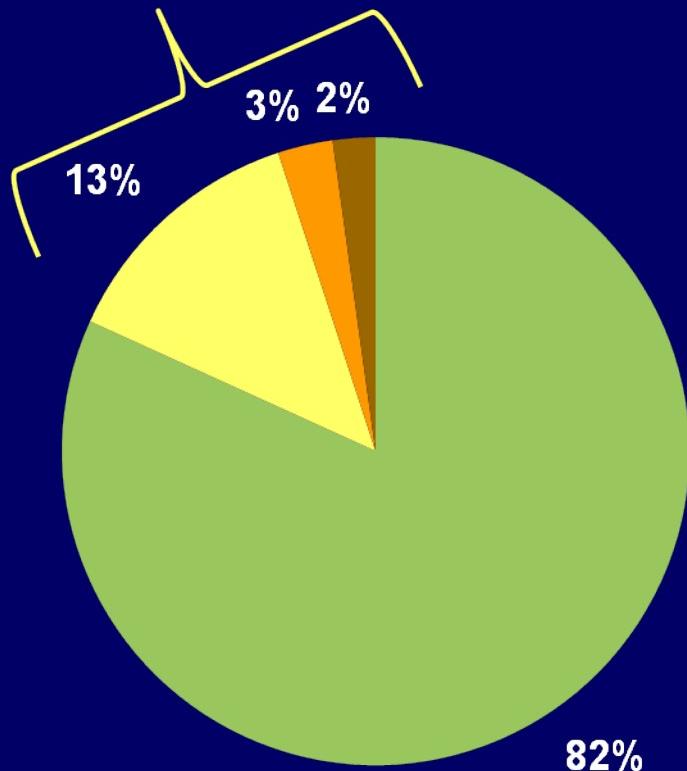
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# Spouse Demographics

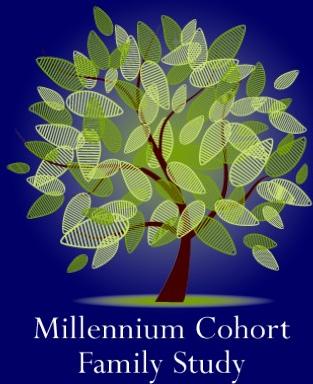
## Spouse Ever Served in the US Military

n = 1,364

- No
- Active duty
- Reserve/Guard
- Both

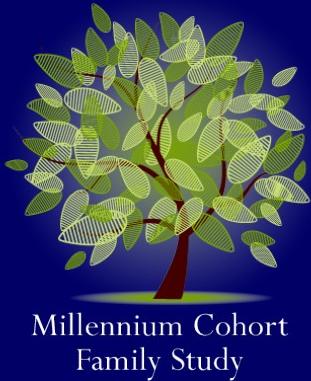


Spouse = Family Study participant



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# Spouse Demographics



## Spouse Currently Serving in the US Military

- No
- Active duty
- Reserve/Guard

n = 733

7%

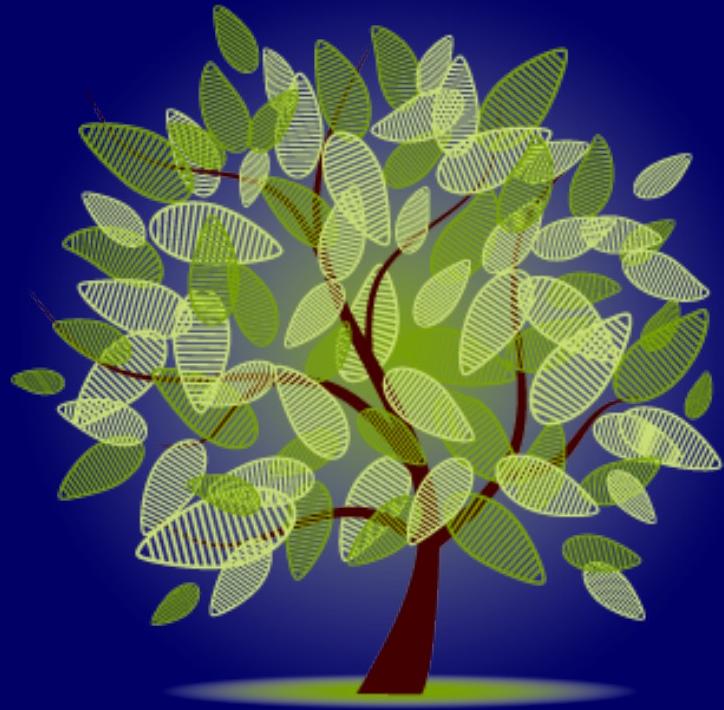
3%

90%

Spouse = Family Study participant



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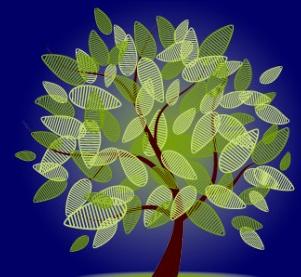


Millennium Cohort  
**Family Study**

**Self-reported Family Data:  
Health Status**

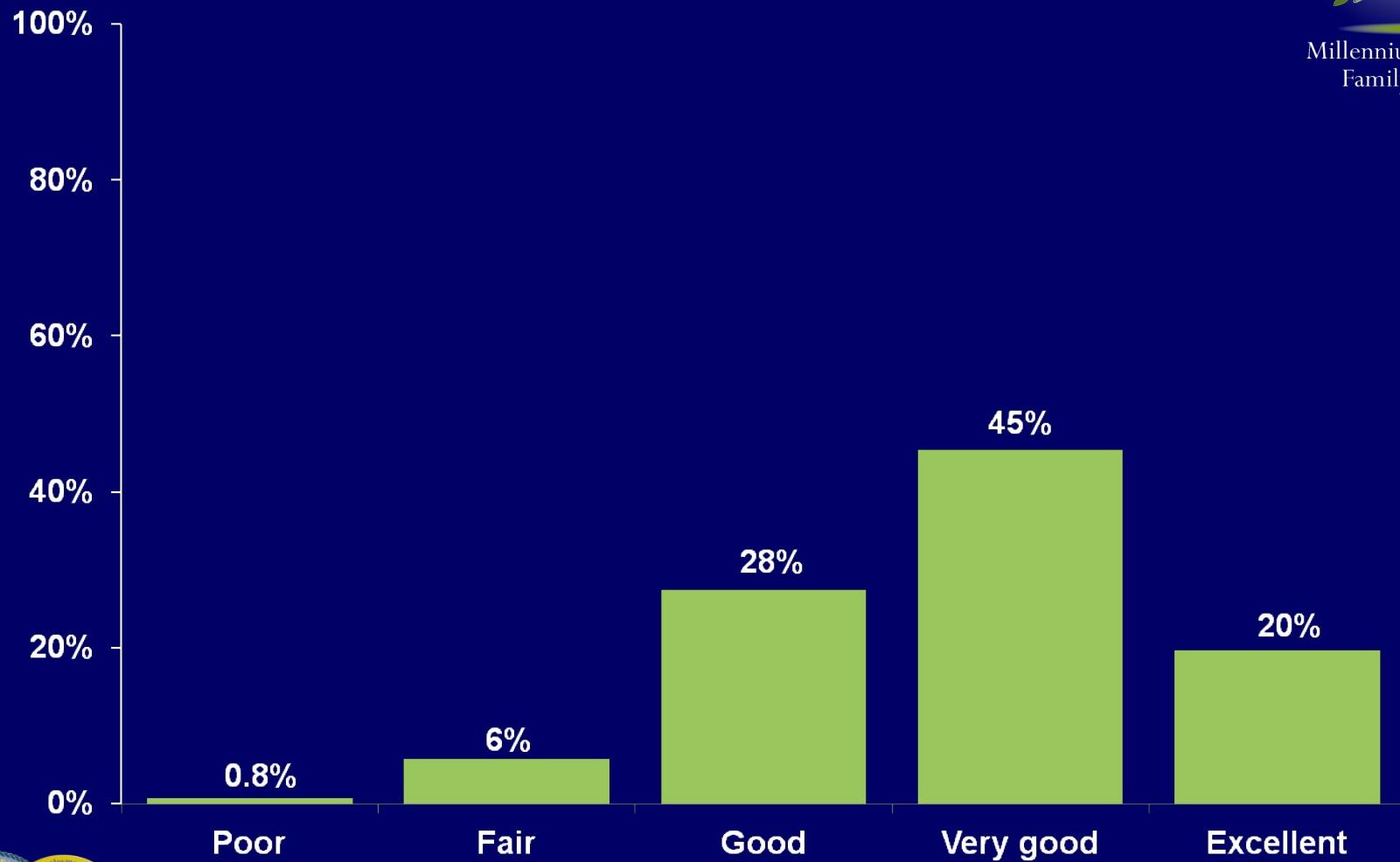


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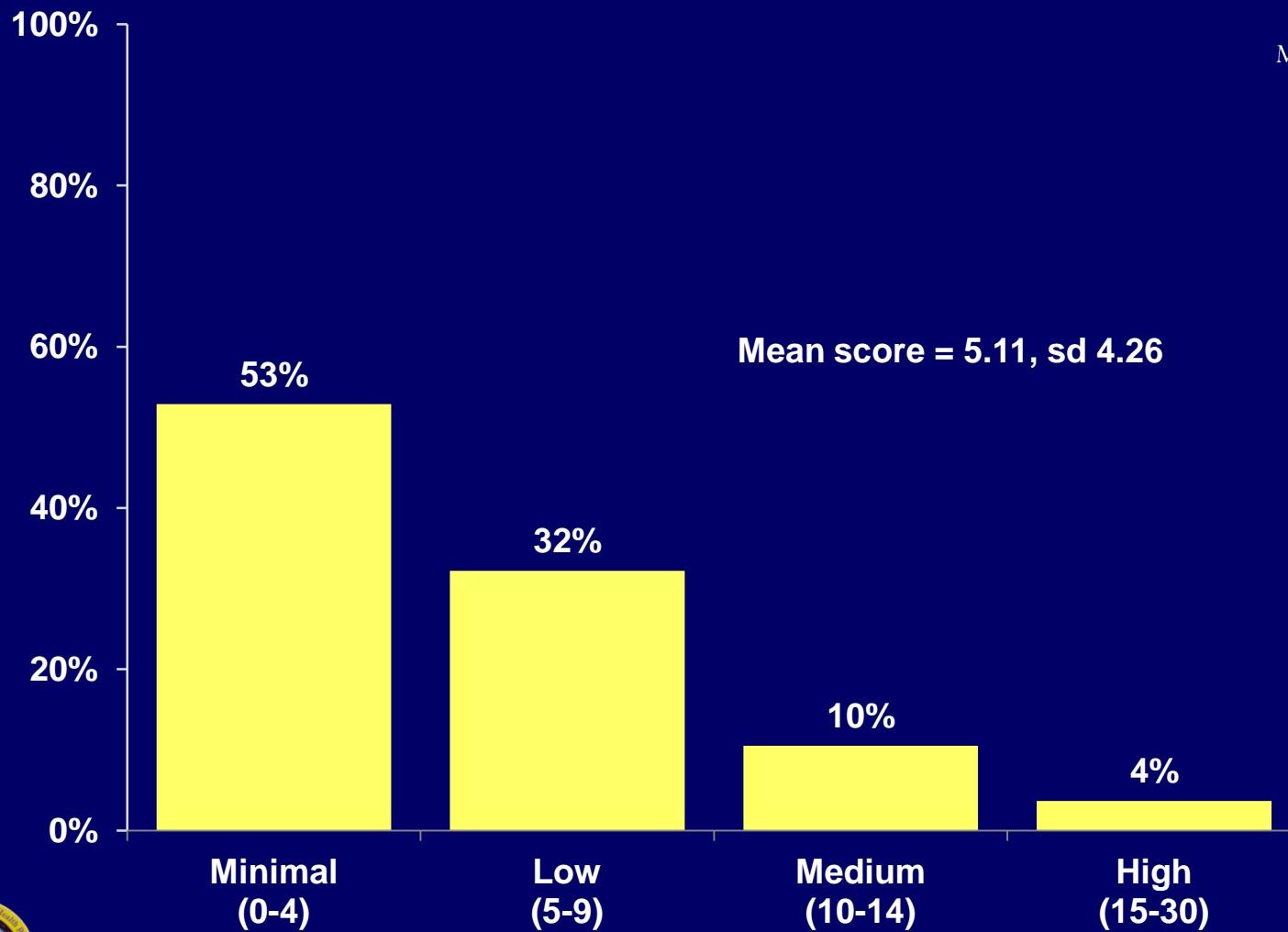
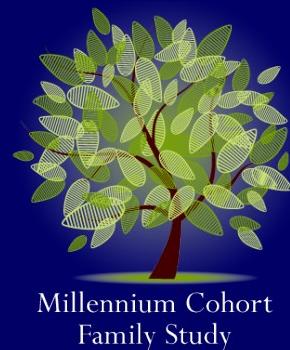
Millennium Cohort  
Family Study

# General Health (SF-36V)



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# Somatic Symptom Severity (PHQ)



# Self-reported Diagnosed Conditions



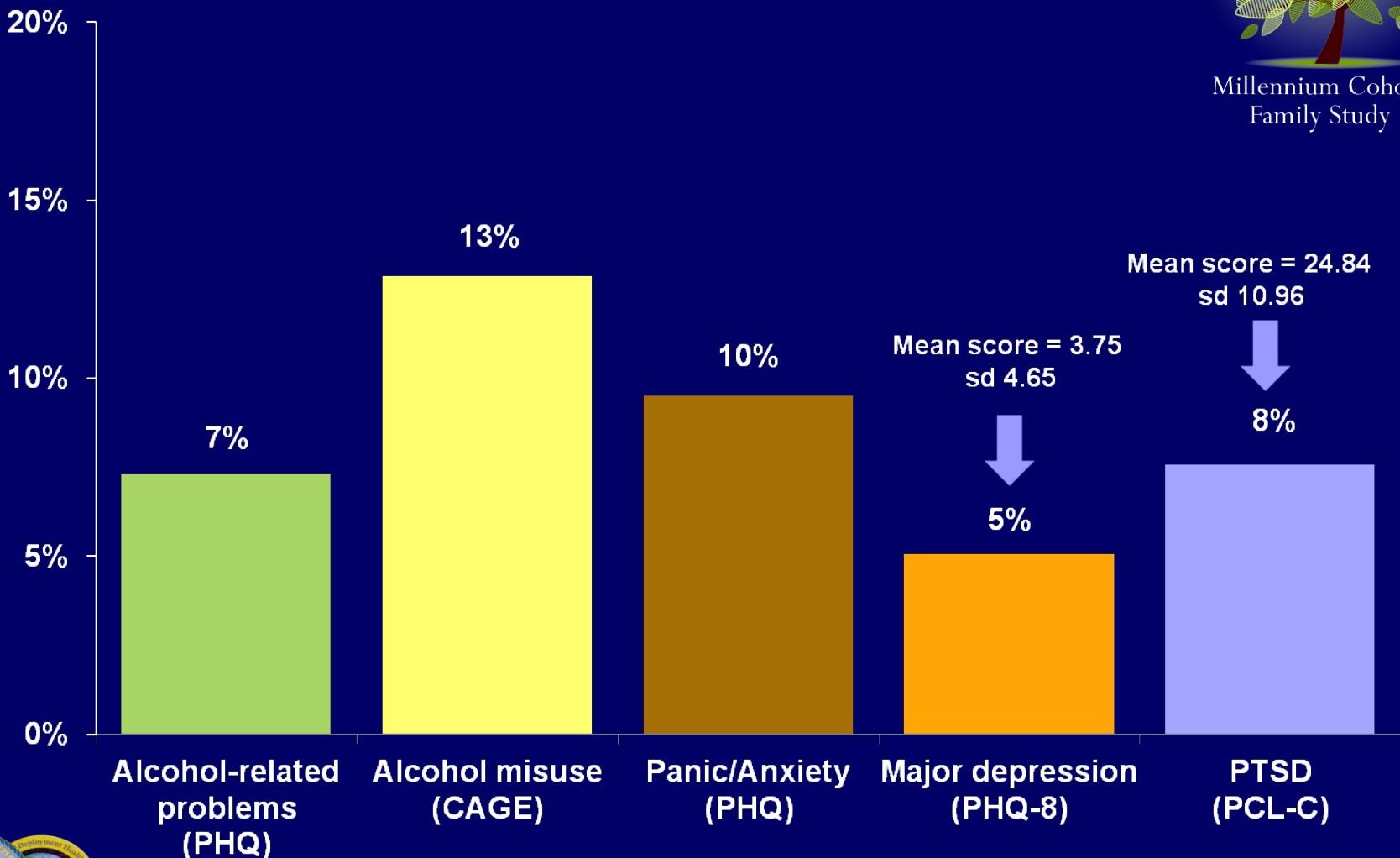
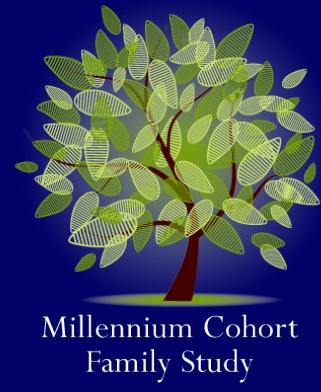
Millennium Cohort  
Family Study

- **59% of responders reported ever being diagnosed with at least 1 health condition (total of 46 choices)**
  - **Top 6 reported conditions:**
    - \* **Migraine (18.8%)**
    - \* **Acid reflux or ulcer (12.6%)**
    - \* **Urinary tract infection (12.1%)**
    - \* **Asthma (11.0%)**
    - \* **Anemia (8.8%)**
    - \* **Hypertension (6.5%)**
  - **Top 3 reported mental health conditions:**
    - \* **Depression (18.2%)**
    - \* **PTSD (3.5%)**
    - \* **Manic depressive disorder (1.5%)**

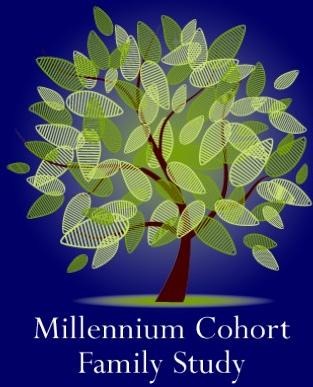


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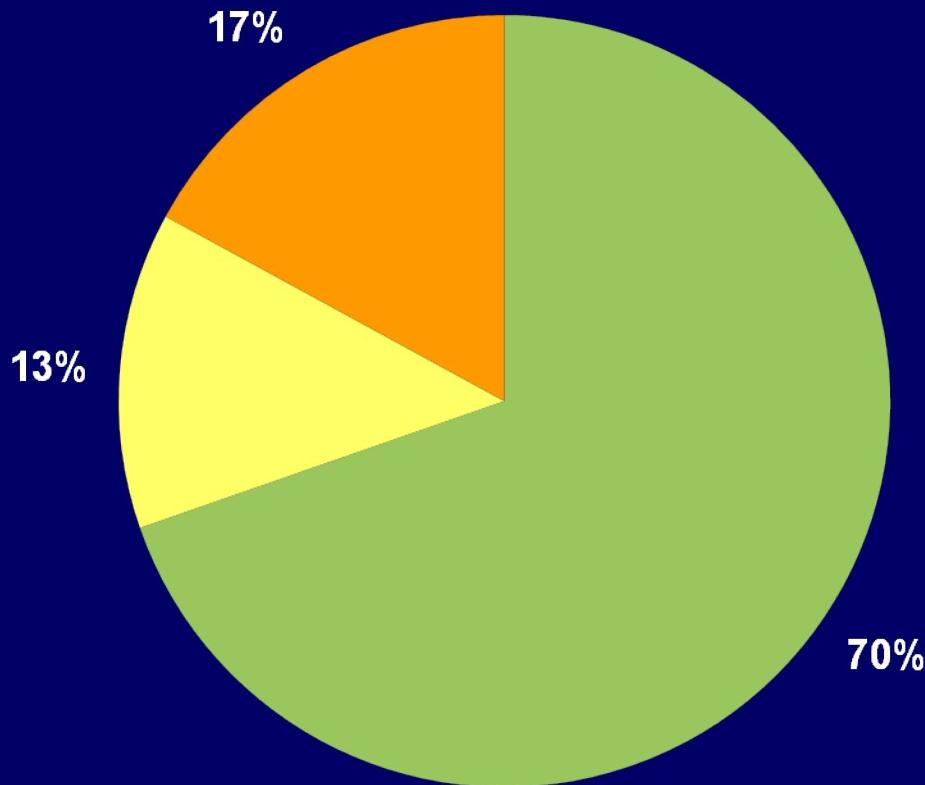
# Mental Health Screening

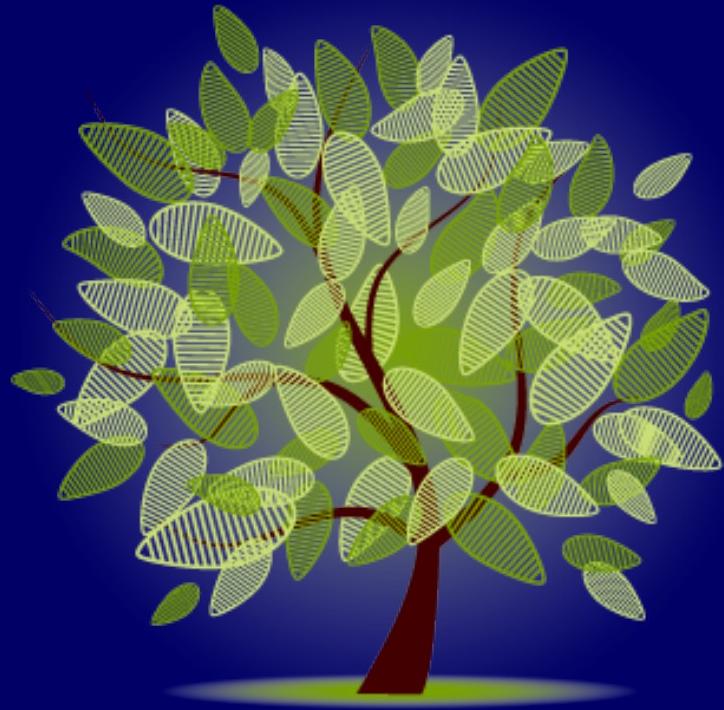


# Smoking Status



- Non-smoker
- Past smoker
- Current smoker





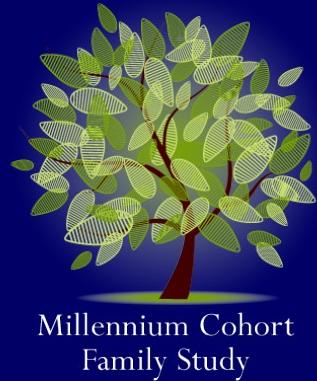
Millennium Cohort  
Family Study

**Self-reported Family Data:  
Social Support and Military Life**



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# Social Support



- **83% of responders report ‘moderately’ or higher levels of support from family and friends within the last 4 weeks**
- **68% of responders reported the military provides ‘good’ or higher efforts to help the service member deal with the stresses of military life**
- **72% of responders reported the military provides ‘good’ or higher efforts to help spouse and family deal with the stresses of military life**



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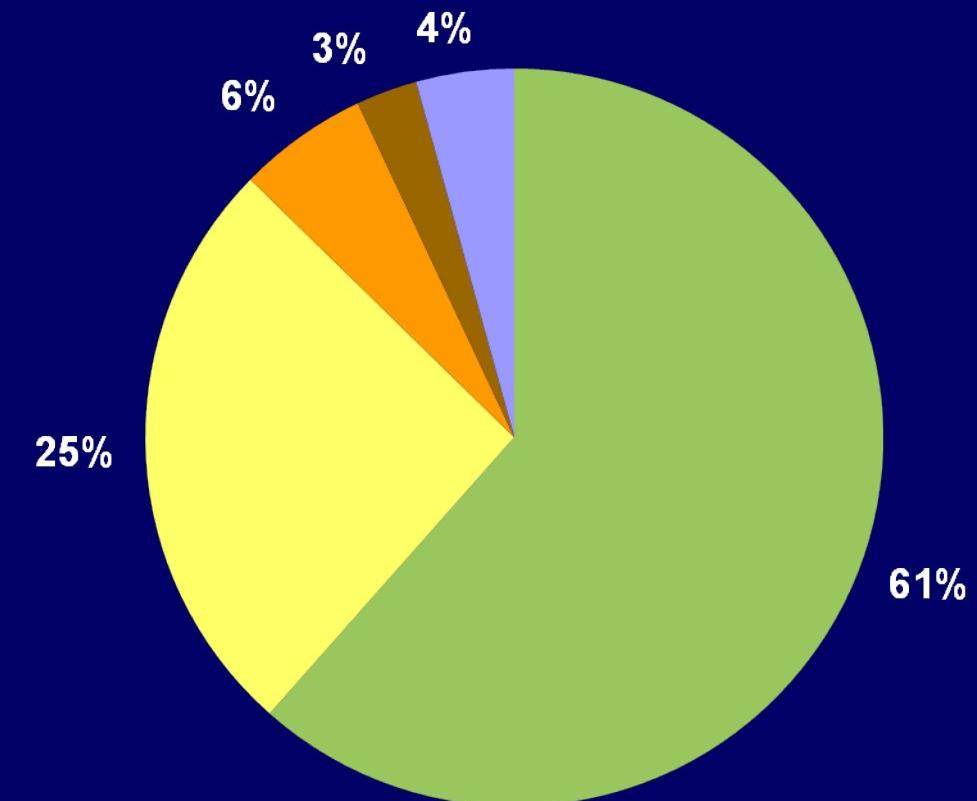
# Quality of Marriage Index



Millennium Cohort  
Family Study

Have a good marriage

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree



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# Stressful Life Events



- **80.7% of responders reported ever experiencing at least 1 stressful life event (total number of 10 choices)**
  - 35.9% reported experiencing 3 or more events
- **Mean number of experiences reported = 2.16 (sd 1.76)**
- **Most prevalent stressful life events:**
  - Family member or loved one died (57.4%)
  - Family member or loved one became ill (42.5%)
  - Changed job or career path involuntarily (31.0%)
  - Unplanned pregnancy (23.3%)
  - Divorced or separated (13.7%)

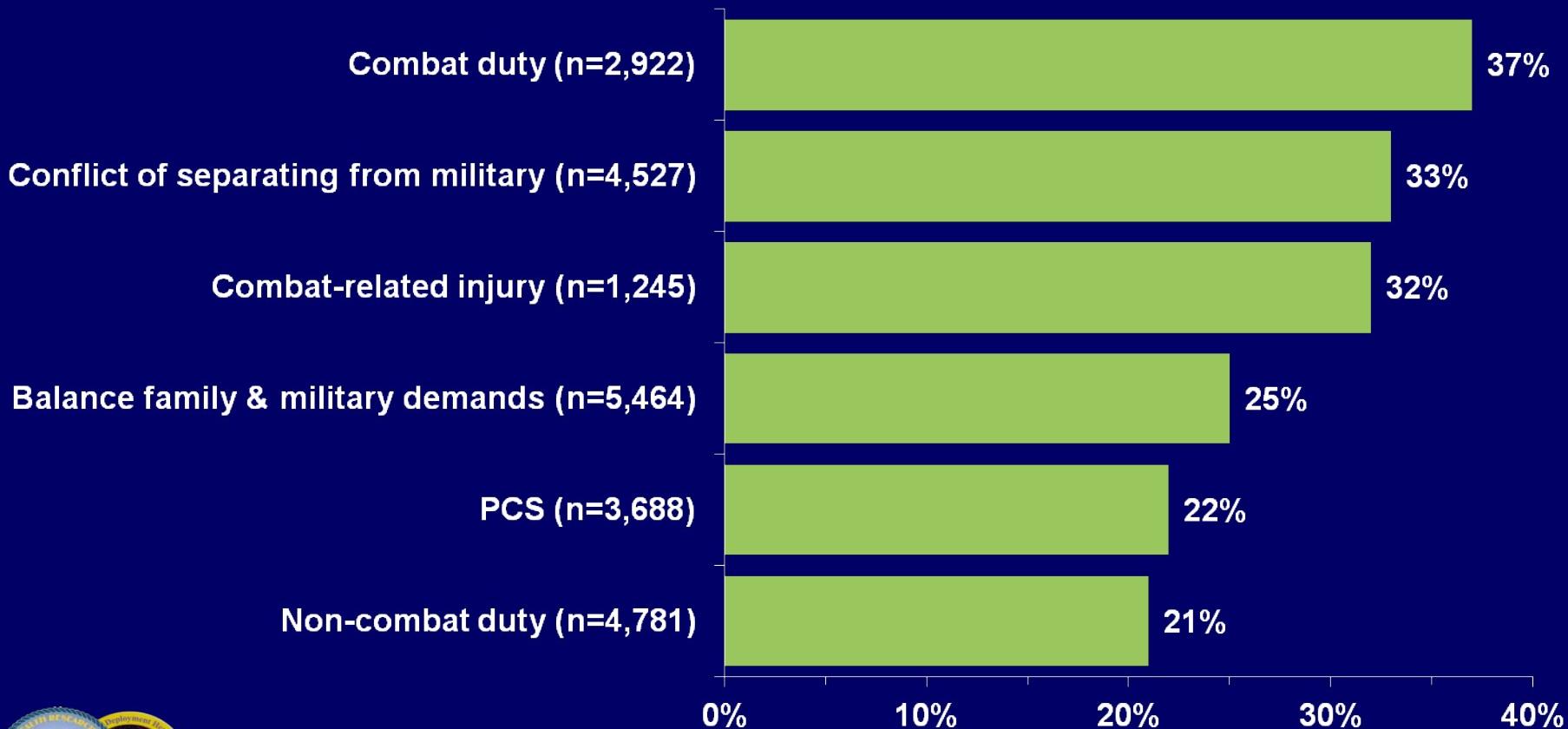


# Stressful Military Family Situations



Millennium Cohort  
Family Study

## Percentage of Spouses Responding “Very Stressful”



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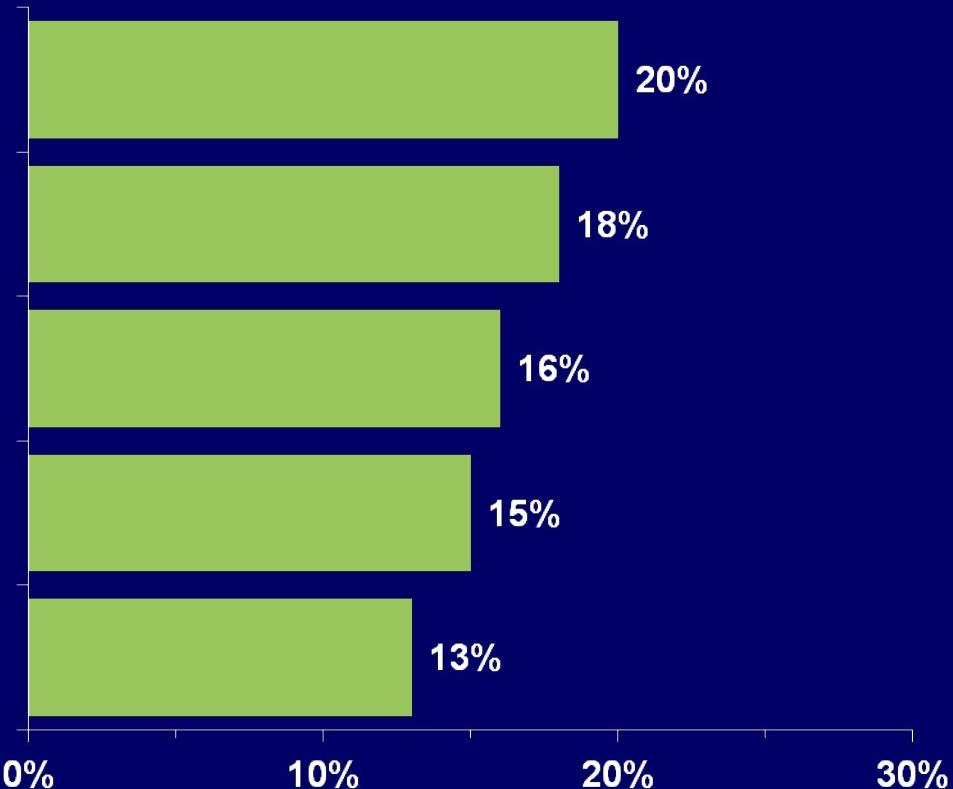
# Stressful Military Family Situations, continued



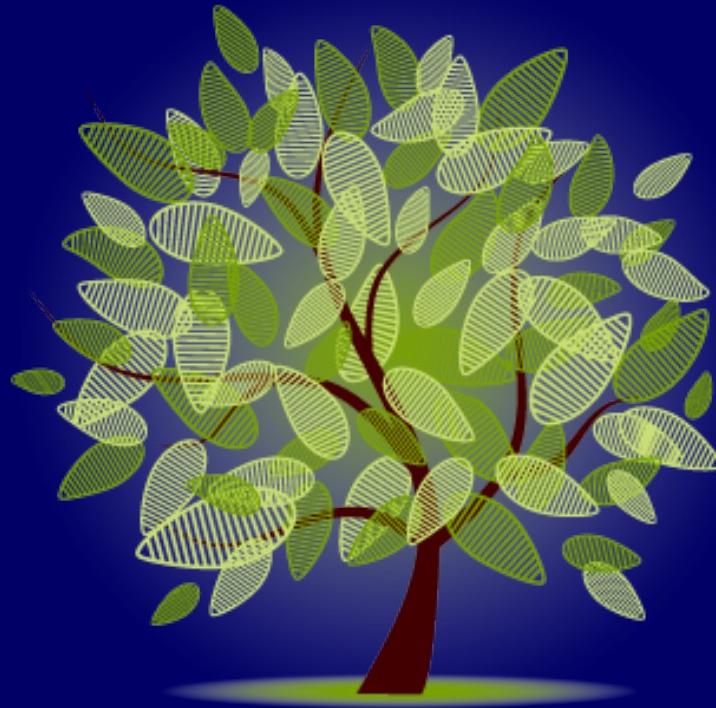
Millennium Cohort  
Family Study

## Percentage of Spouses Responding “Very Stressful”

Caring for ill, injured disabled spouse (n=1,713)



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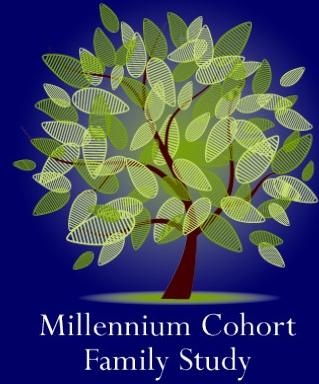
Millennium Cohort  
Family Study

## **Self-reported Family Data: Children**



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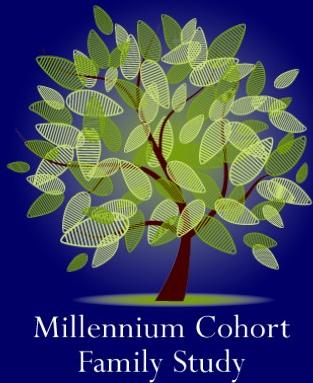
# Children



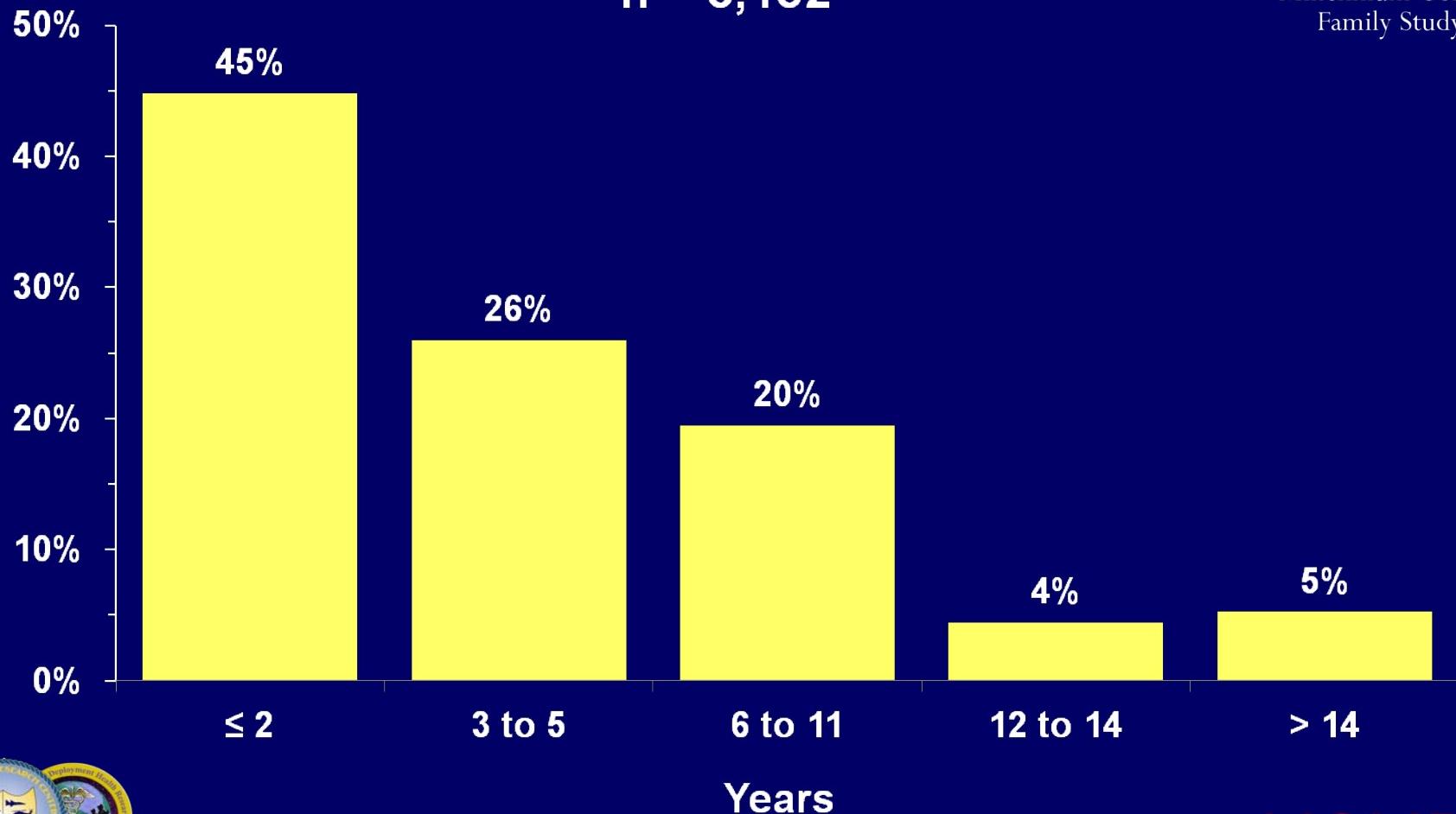
- **4,713 (63%) participants reported having children with current and/or prior relationship(s)**
  - **Total number of children reported = 8,152**
  - **Total number range = 0-8 children**
  - **Mean number of children per family = 1.65 (sd 0.90)**



# Children



Age of Children  
 $n = 8,152$

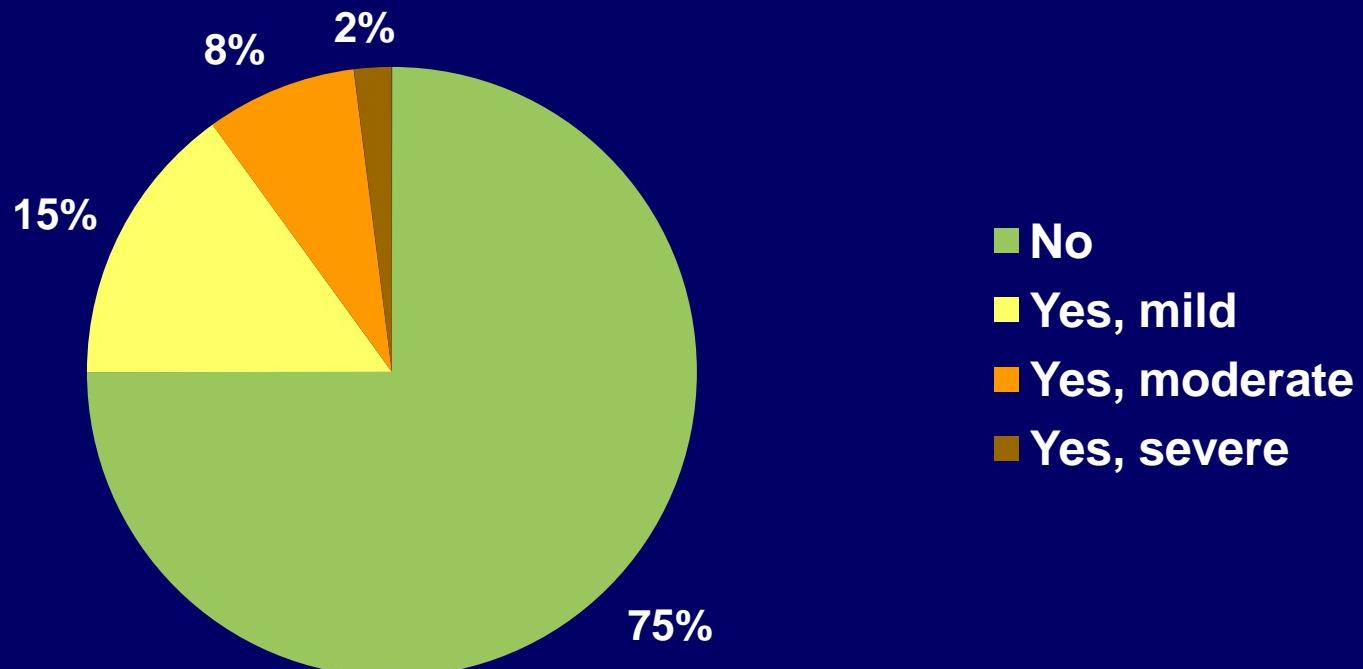
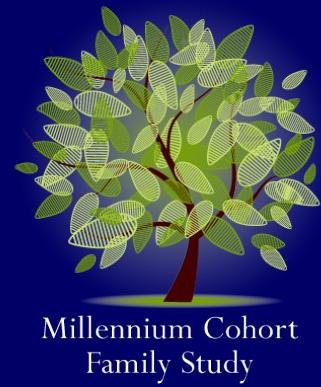


Years

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Science to Soldier

# Children

**Families with a Child(ren) Currently Experiencing a Behavioral, Emotional, or Learning Problem,  
n = 2,712\***

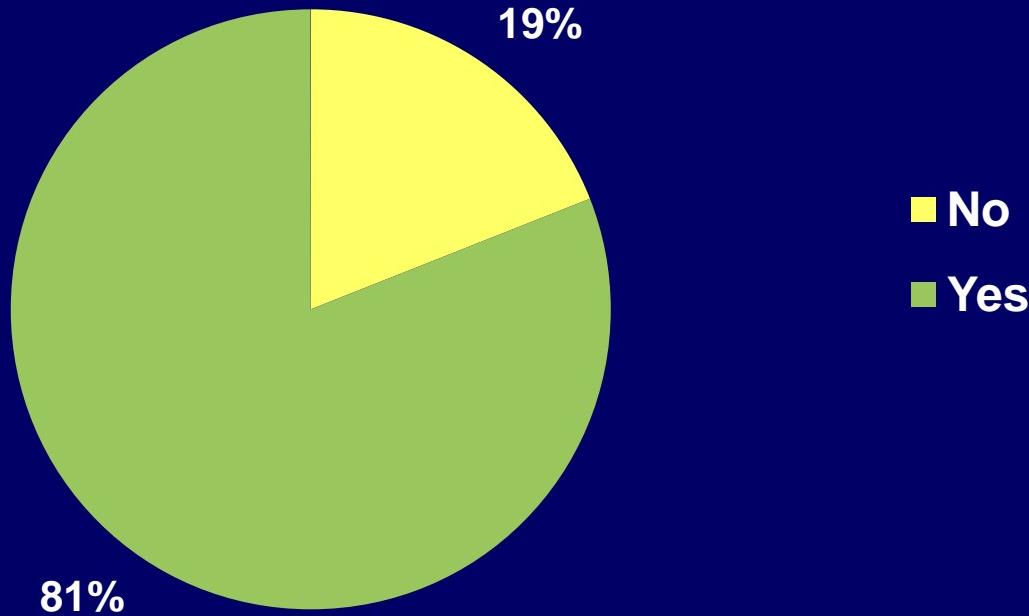
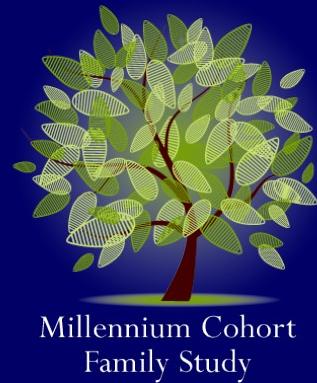


\*Families with only children 2 years old or younger were excluded



# Children

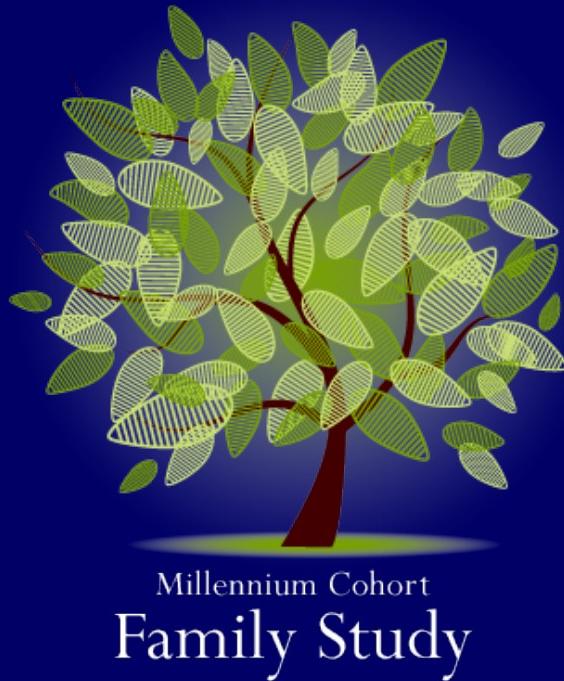
Families with a Child(ren) that Has Made Close Friends  
 $n = 2,715^*$



\*Families with only children 2 years old or younger were excluded



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Science to Soldier

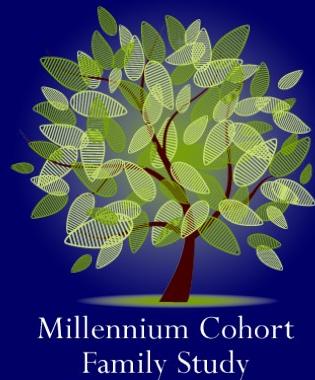


# Comparing the Mental Health Status of Family Study Responders to Service Member Responders



**MOMRP**  
*Science to Soldier*

# Odds of a Spouse Screening Positive for a Mental Health Condition if the Service Member Screened Positive for the Same Mental Health Condition

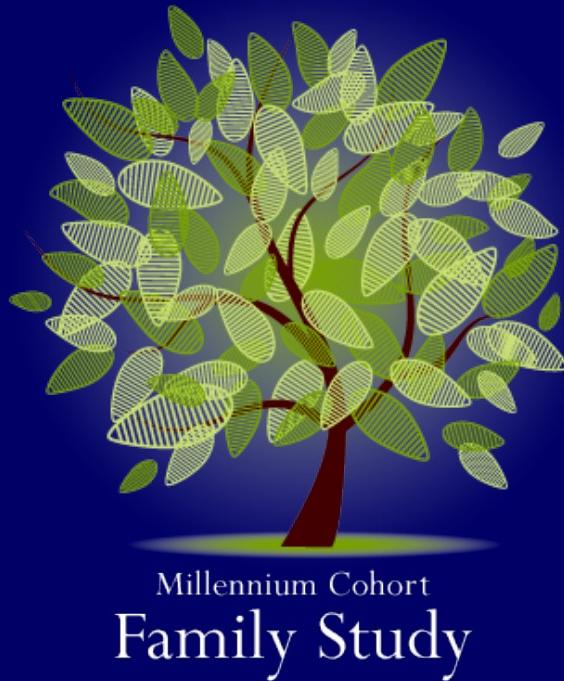


Mental Health Condition	Service Member* n (%)	Spouse* n (%)	OR (95%CI)
Depression (n=7,298)	328 (4.5)	364 (5.0)	5.8 (4.3,7.7)
PTSD (n=7,350)	586 (8.0)	563 (7.7)	4.4 (3.5,5.4)
Alcohol-related Problems (n=6,692)	626 (9.3)	513 (7.7)	3.5 (2.8,4.4)

\*Participants who screened positive for each mental health condition  
Abbreviation: CI, confidence interval



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# Comparing the Service Member Characteristics of Family Responders to the Overall Married Military Population with 2-5 Years of Service



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Service Member Characteristics	Family Study Non-Responders	Family Study Responders*	Married Military Population with 2-5 Years of Service†
	n (%)	n (%)	n (%)
	n =13,783	n =8,739	N = 347,481
<b>Sex</b>			
Male	10248 (74)	7568 (87)	290,468 (84)
Female	3535 (26)	1171 (13)	57,012 (16)
<b>Race/ethnicity</b>			
White, non-Hispanic	9786 (71)	7084 (81) 	228,623 (66)
Black, non-Hispanic	1460 (11)	447 (5)	41,167 (12)
Asian/Pacific Islander	748 (5)	343 (4)	14,524 (4)
Hispanic	1387 (10)	625 (7)	43,873 (13)
Native American	236 (2)	138 (2)	6,885 (2)
Other	166 (1)	102 (1)	12,409 (4)
<b>Age (years)</b>			
17-24	4993 (36)	2528 (29)	107,124 (31)
25-34	7584 (55)	5389 (62)	213,148 (62)
35-44	1099 (8)	721 (8)	22,574 (6)
>44	107 (1)	101 (1)	2,340 (1)

Total population may vary by variable due to missing data.

\*Responders include those that responder to either the paper or the web version of the survey.

†Married military population data from 31 Oct 2010.

<b>Service Member Characteristics</b>	<b>Family Study Non- Responders n (%) n =13,783</b>	<b>Family Study Responders* n (%) n =8,739</b>	<b>Married Military Population with 2-5 Years of Service† n (%) N = 347,481</b>
<b>Education</b>			
Some college or less	11021 (82)	6105 (72)	300,312 (87)
Bachelor's or higher degree	2403 (18)	2391 (28) 	44,875 (13)
<b>Service Branch</b>			
Air Force	4436 (32)	2381 (27) 	59,329 (17)
Army	6103 (44)	4048 (46)	164,201 (47)
Coast Guard	281 (2)	251 (3)	6,325 (2)
Marine Corps	1152 (8)	824 (9)	58,201 (17)
Navy	1811 (13)	1235 (14)	59,425 (17)
<b>Dual Military</b>			
No	11881 (86)	8188 (94)	310,478 (90)
Yes	1902 (14)	551 (6)	34,709 (10)

Total population may vary by variable due to missing data.

\*Responders include those that responder to either the paper or the web version of the survey.

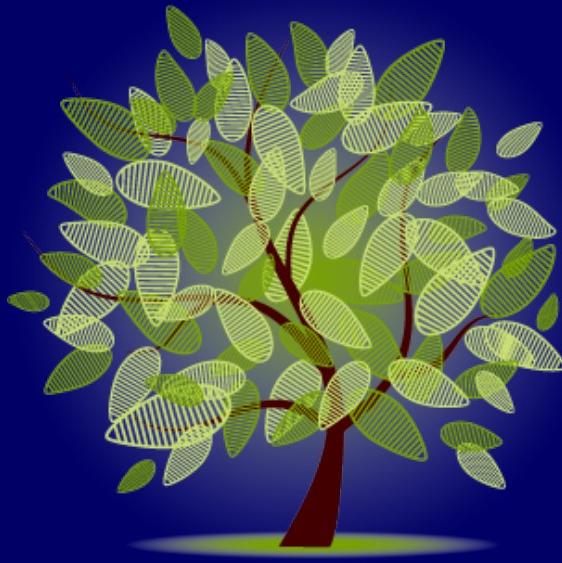
†Married military population data from 31 Oct 2010.

<b>Service Member Characteristics</b>	<b>Family Study Non-Responders</b> n (%) n = 13,783	<b>Family Study Responders*</b> n (%) n = 8,739	<b>Married Military Population with 2-5 Years of Service†</b> n (%) N = 347,481
<b>Military Component</b>			
Active Duty	11015 (80)	6774 (78)	254,291 (73)
Reserve/Guard	2768 (20)	1965 (22)	93,190 (27)
<b>Military Pay Grade</b>			
Enlisted	11740 (85)	6588 (75)	316,432 (91)
Officer	2,403 (15)	2,151 (25) 	31,049 (9)

Total population may vary by variable due to missing data.

\*Responders include those that responder to either the paper or the web version of the survey.

†Married military population data from 31 Oct 2010.



Millennium Cohort  
Family Study

# Comparing the Family Cohort Participants to Family Members of Military Personnel with 2-5 Years of Service



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Characteristics of Spouses in DEERS*	Family Study Non-Responders	Family Study Responders*	All Military Spouse Population, 2-5 years of Service
	n (%)	n (%)	n (%)
	n = 7,030	n = 4,739	N = 178,712
<b>Sex</b>			
Male	1,044 (85)	338 (7)	11,783 (7)
Female	5,986 (15)	4,401 (93)	166,929 (93)
<b>Age (years)<sup>a</sup></b>			
≤ 24	2,878 (41)	1,581 (33)	77,475 (43)
25-34	3,658 (52)	2,815 (59)	85,438 (48)
35-44	425 (6)	278 (6)	13,066 (7)
>44	69 (1)	65 (2)	2,733 (2)

Abbreviations: DEERS, Defense Enrollment and Eligibility Reporting System; SD, standard deviation

\*DEERS data pulled as of 01 March 2013. Population represents all spouses of currently married service members who were on Active status as of March 2013.

<sup>a</sup>Age is calculated as of the date the Family Cohort began enrollment on 07 June 2011.

<b>Characteristics of Children in DEERS*</b>	<b>Children of Family Study Non-Responders</b> n (%) n = 9,628	<b>Children of Family Study Responders*</b> n (%) n = 6,465	<b>All Military Children Population, 2-5 years of service</b> n (%) N = 261,589
<b>Sex</b>			
Male	4,965 (52)	3,399 (52)	133,286 (51)
Female	4,663 (48)	3,066 (48)	128,303 (49)
<b>Age (years) <sup>a</sup></b>			
≤ 2	3,879 (40)	2,728 (42) 	89,085 (34)
3-5	2,825 (29)	1,828 (28)	72,944 (28)
6-11	2,100 (22)	1,364 (21)	66,798 (25)
12-14	414 (4)	284 (5)	15,690 (6)
≥ 15	410 (4)	261 (4)	17,072 (7)

Abbreviations: DEERS, Defense Enrollment and Eligibility Reporting System; SD, standard deviation

\*DEERS data pulled as of 01 March 2013. Population represents all spouses of currently married service members who were on Active status as of March 2013.

<sup>a</sup>Age is calculated as of the date the Family Cohort began enrollment on 07 June 2011.

# Family Cohort Summary

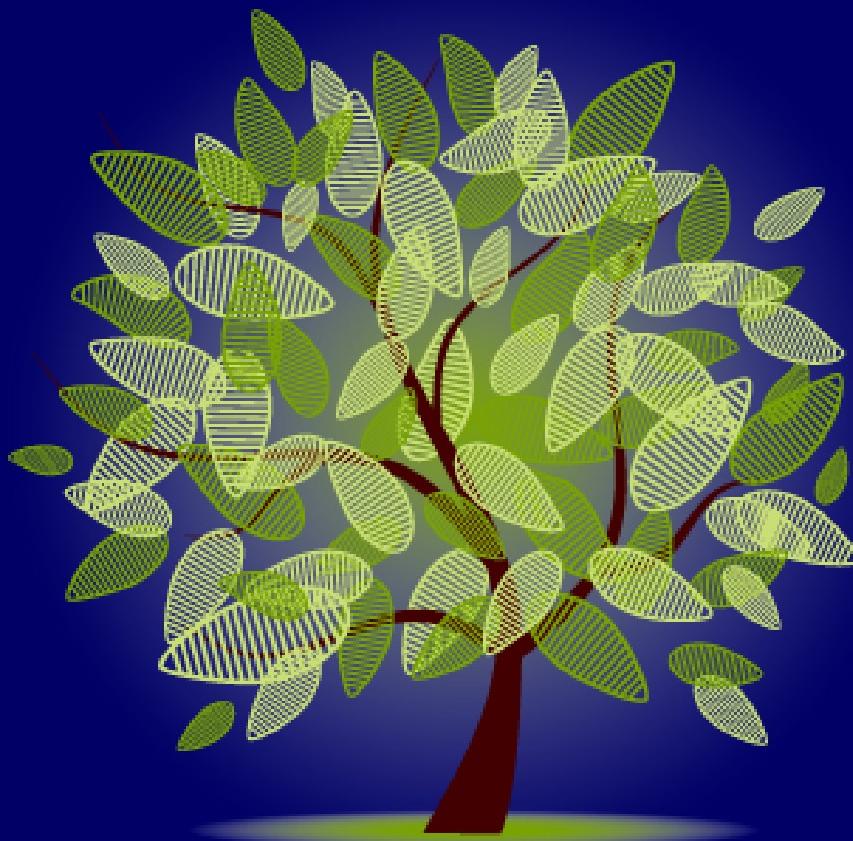


Millennium Cohort  
Family Study

- **The Family Study Cohort consists primarily of younger females with overall good health and positive feelings of support**
- **Our population is representative of military spouses married to service members with 2-5 years of service**
- **Frequency differences are consistent with other population-based studies**
- **Next steps**
  - **Subsequent data pull will occur when enrollment is complete**
  - **Primary studies will begin once data has been cleaned**



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Millennium Cohort  
Family Study



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## Appendix C: Weekly Reporting – Survey Implementation & Response Rates

September 25, 2012



P4 response rate: 17%

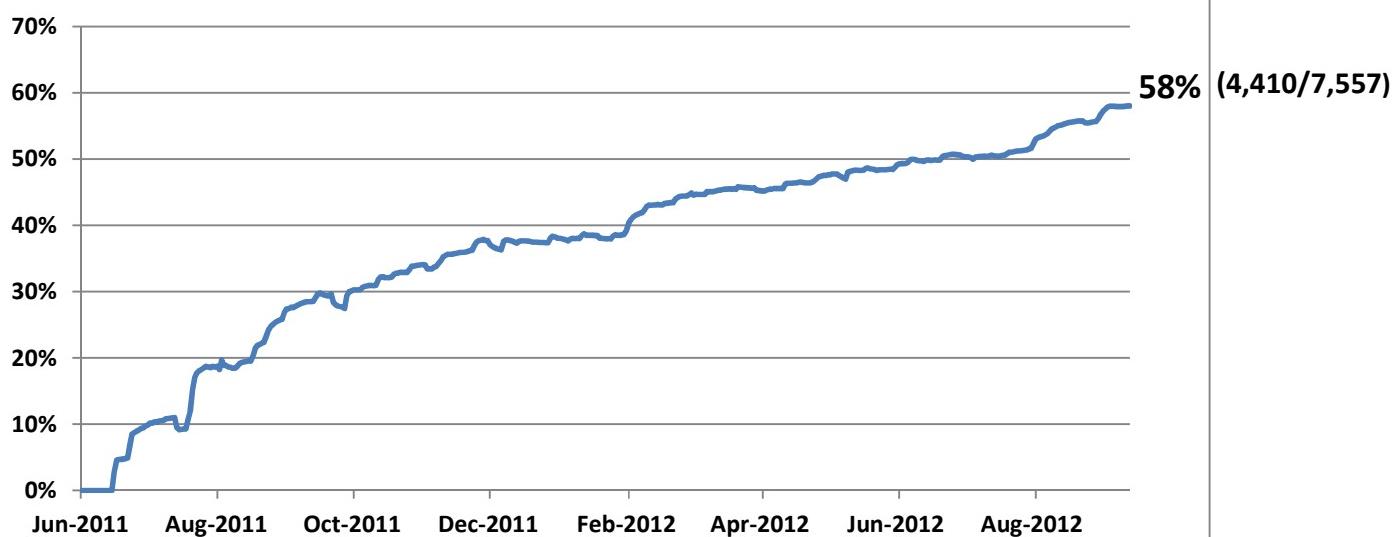
**P4 Contact:**

- Q3 mailed 6-8 September
- Email sent 24 September
- Postcard will be sent 4-6 October

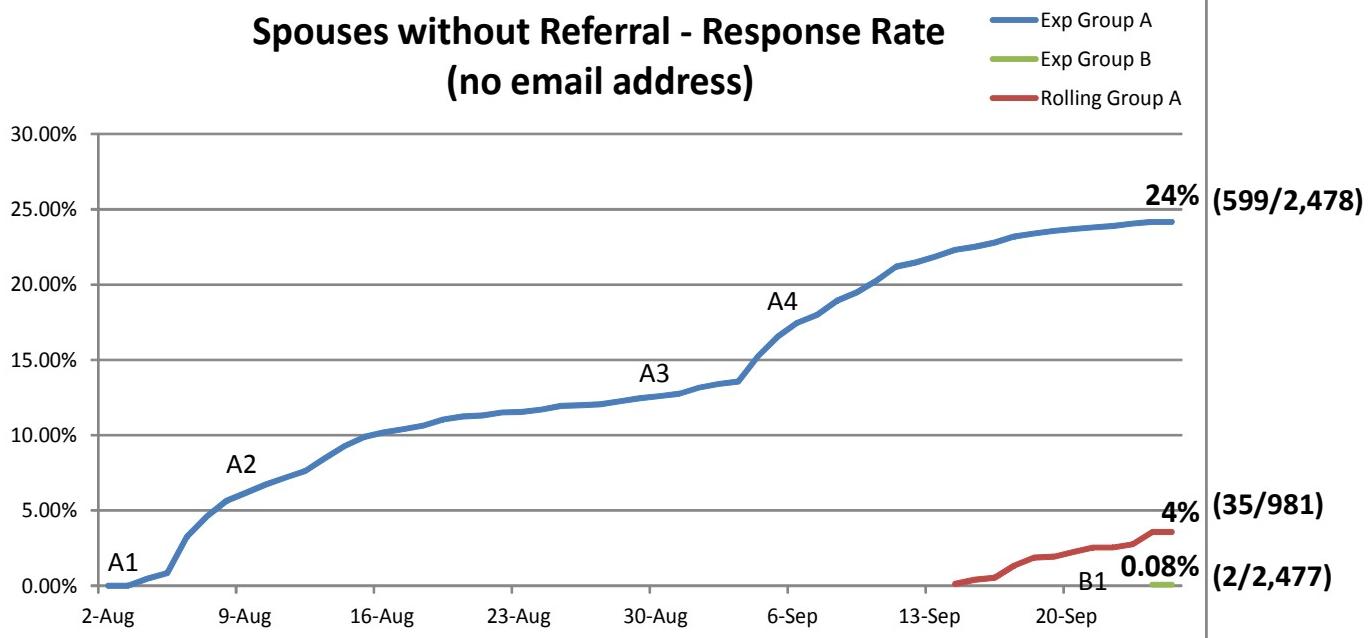
P4 referral rate: 35%

Family Study Total Completed: 5,046

### Spouses with Referral - Response Rate (email augmented)



### Spouses without Referral - Response Rate (no email address)



Combined Response Rate: 37%

## **Experimental Groups**

### Experimental Group A (N = 2,478):

- A1 Magnet Mailer mailed on 2 August
- A2 Postcard Reminder mailed on 9 August
- A3 Sample Survey with \$5 Starbucks card mailed on 30 August
- A4 Deanie Dempsey endorsement letter in card mailed on 6 September

A few of the upcoming mailings include:

- A5 Survey sent FedEx will be mailed on 28 September
- A6 Postcard Reminder will be mailed on 5 October

### Experimental Group B (N = 2,477):

- B1 Survey with Magnet mailed on 20 September

A few of the upcoming mailings include:

- B2 Postcard Reminder will be mailed on 27 September
- B3 Survey with \$5 Starbucks card will be mailed on 18 October

## **Rolling Groups**

- Rolling without Referral (N=35/981)

## **SRP**

- Webinar: November 7th, from 9:00-11:00 AM PST
- Annual meeting scheduled for April 15<sup>th</sup>
  - Millennium Cohort's EAB meeting scheduled for April 16<sup>th</sup>-17<sup>th</sup>

## **Note: Mailing Procedure**

Group A: Push to the Web (August 2nd – mid-Oct.)

- A1 - Magnet Picture Frame and Card Mailer (week 1)
- A2 - Postcard reminder (week 2)
- A3 - Sample Survey with \$5 card (week 5)
- A4 - Deanie Dempsey Card reminder (week 6)
- A5 - Paper Survey sent FedEx (week 9)
- A6 - Postcard reminder (week 10)

Group B: Push to the Paper (Sept. 20th – mid Nov.)

- B1 - Paper Survey with Magnet Picture Frame (week 1)
- B2 - Postcard reminder (week 2)
- B3 - Paper Survey with \$5 card (week 5)
- B4 – Deanie Dempsey Card reminder (week 6)
- B5 - Paper Survey sent FedEx (week 9)
- B6 - Postcard reminder (week 10)



October 30, 2012



**P4 response rate: 17%**

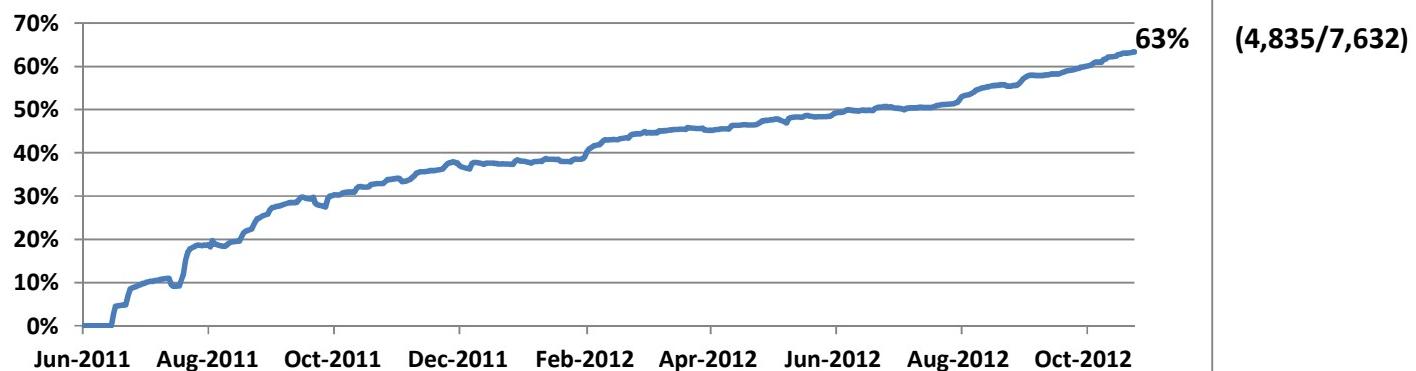
**P4 Upcoming Contact:**

- Email was sent 23 October
- Veteran's Day postcard will be mailed 1-3 November
- Q4 mailed FedEx or priority mail will be mailed 26-28 November

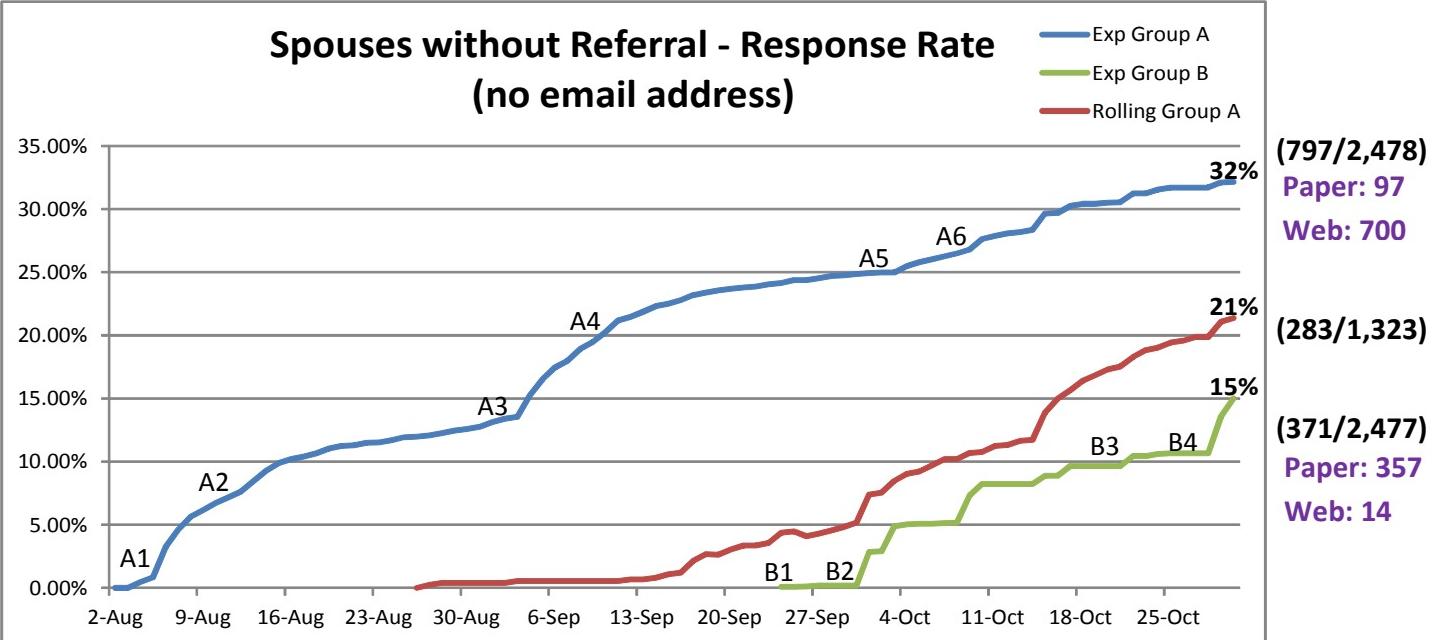
**P4 referral rate: 35%**

**Family Study Total Completed: 6,286 [Paper: 598 and Web: 5,688]**

### Spouses with Referral - Response Rate (email augmented)

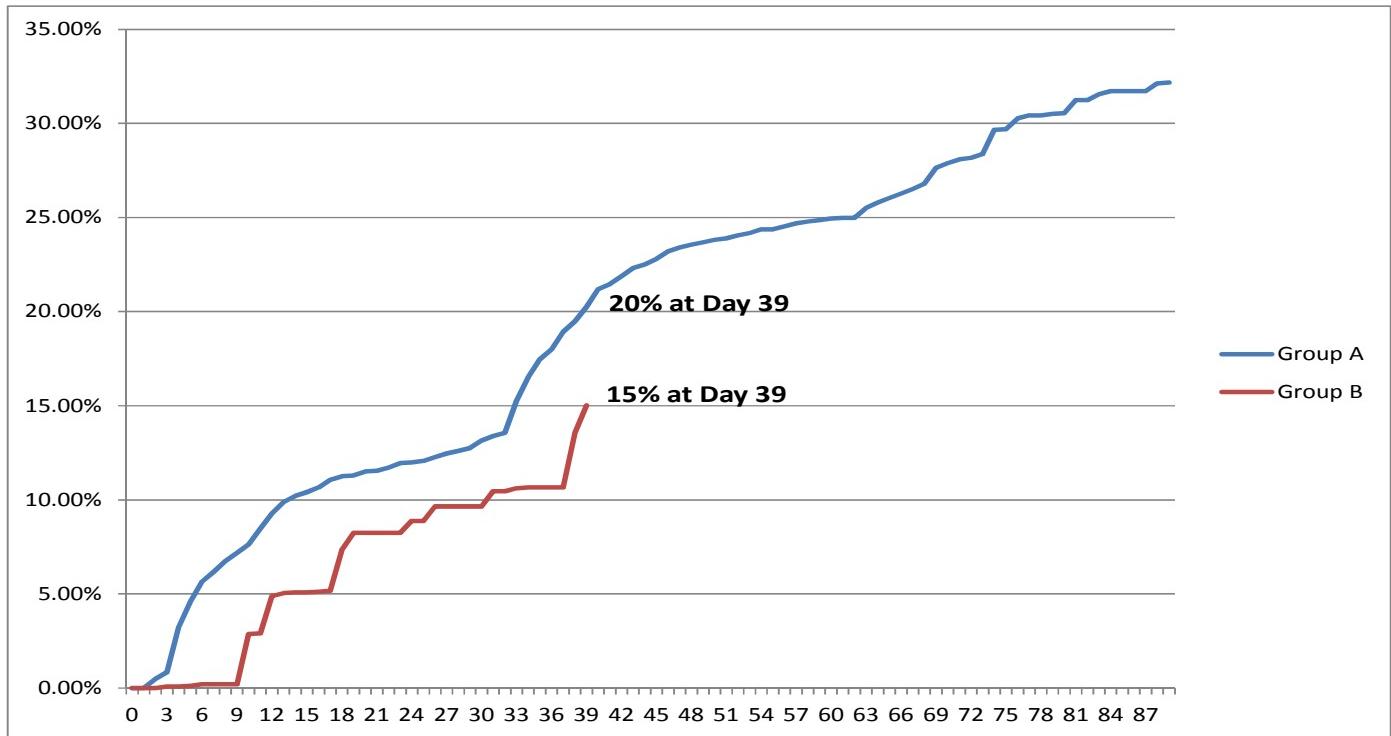


### Spouses without Referral - Response Rate (no email address)



**Combined Response Rate: 45%**

## Group A and Group B Day-by-Day Comparison



## Experimental Groups

### Experimental Group A (N = 2,478):

- A1 Magnet Mailer mailed on 2 August
- A2 Postcard Reminder mailed on 9 August
- A3 Sample Survey with \$5 Starbucks card mailed on 30 August
- A4 Deanie Dempsey endorsement letter in card mailed on 6 September
- A5 Survey sent FedEx mailed on 2 October
  - PO Box addresses, foreign addresses and APO/FPOs sent USPS Priority Mail
- A6 Postcard Reminder mailed on 5 October

### Experimental Group B (N = 2,477):

- B1 Survey with Magnet mailed on 20 September
- B2 Postcard Reminder mailed on 27 September
- B3 Survey with \$5 Starbucks card mailed on 18 October
- B4 Deanie Dempsey endorsement letter in card mailed on 25 October

A few of the upcoming mailings include:

- B5 Survey sent FedEx will be mailed on 13 November
- B6 Postcard reminder will be mailed on 19 November

## Holiday Mail Break

After a discussion with Dr. Dillman last week, the team decided to hold the mailings until mid-January (as we've discussed) and that we should also hold email until then. Dr. Dillman felt the mailings might work better if they weren't preceded for several weeks by the emails. Likewise, he agreed that we should begin the Reserve Group mid-January.

We began the queue last week, and will resume with mailings on 15 January.

**SRP Webinar:** 7 November, 9:00-11:00 AM PST

**SRP Annual Meeting:** 15 April 2013 (The Millennium Cohort EAB meeting is scheduled for 16-17 April)

November 27, 2012



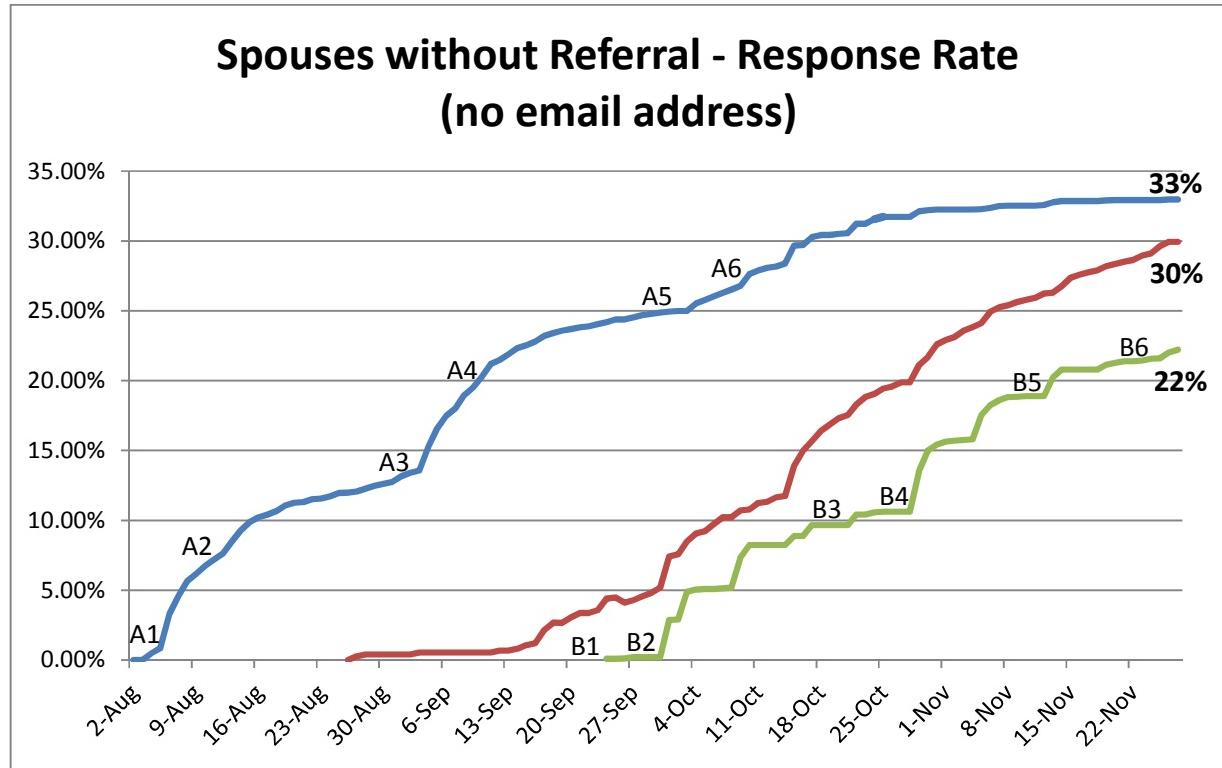
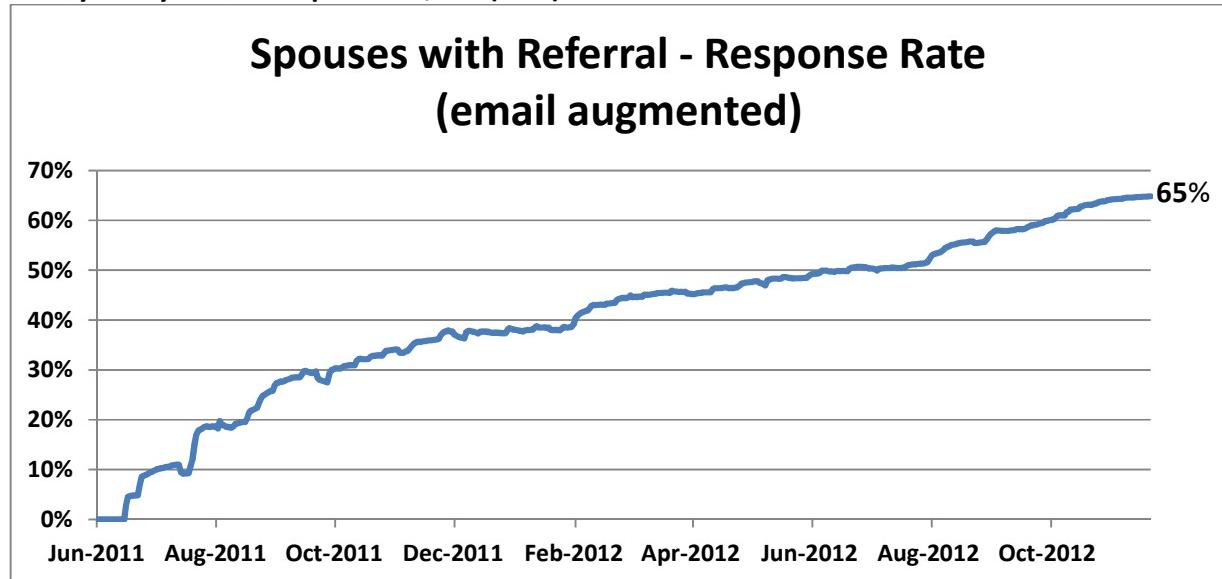
**P4 response rate: 17%**

**P4 Upcoming Contact:**

- Q4 will be mailed 30 November
- Email reminder will be sent 28 November and 18 December
- Reminder postcard will be sent 10 December

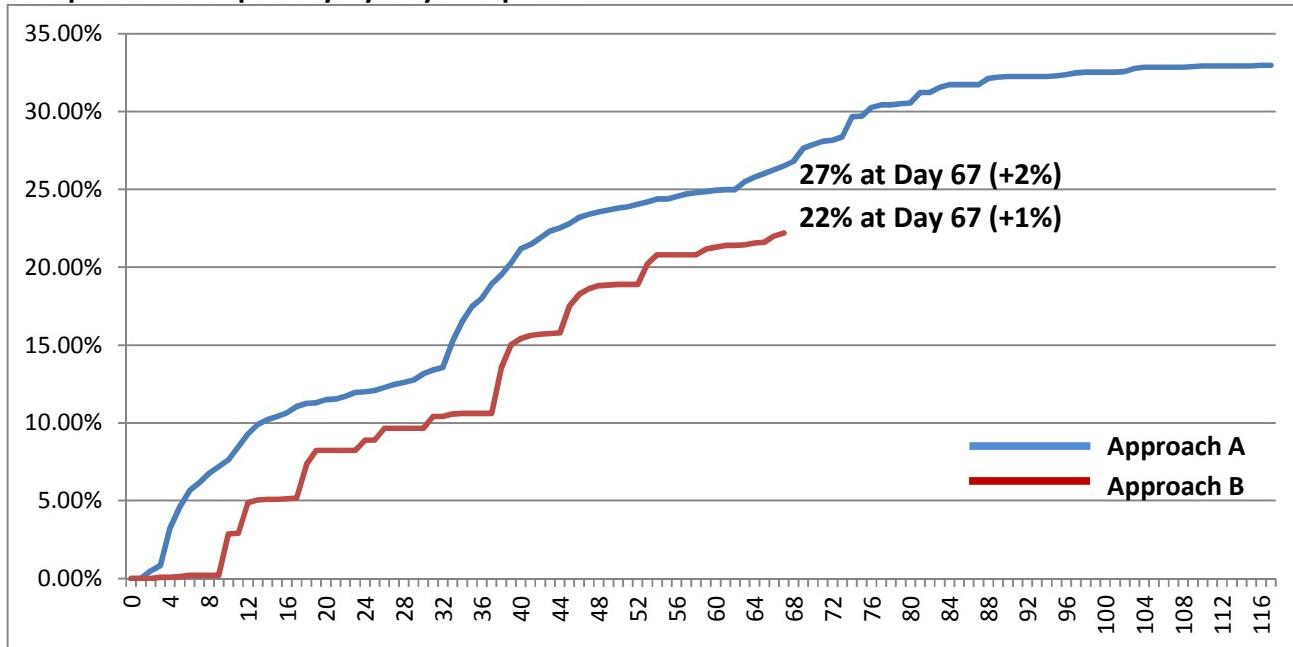
**P4 referral rate: 34%**

**Family Study Total Completed: 6,710 (+ 58)**



**Combined Response Rate: 48%**

## Group A and Group B Day-by-Day Comparison



## Experimental Groups

### Experimental Group A (N = 2,478):

- A1 Magnet Mailer mailed on 2 August
- A2 Postcard Reminder mailed on 9 August
- A3 Sample Survey with \$5 Starbucks card mailed on 30 August
- A4 Deanie Dempsey endorsement letter in card mailed on 6 September
- A5 Survey sent FedEx mailed on 2 October
  - PO Box addresses, foreign addresses and APO/FPOs sent USPS Priority Mail
- A6 Postcard Reminder mailed on 5 October

### Experimental Group B (N = 2,477):

- B1 Survey with Magnet mailed on 20 September
- B2 Postcard Reminder mailed on 27 September
- B3 Survey with \$5 Starbucks card mailed on 18 October
- B4 Deanie Dempsey endorsement letter in card mailed on 25 October
- B5 Survey sent FedEx mailed on 13 November
- B6 Postcard reminder mailed on 19 November

\* Holiday Mail Break: New group mailings will resume on 15 January.

**Panel 4 Spouse Contact web form:** We are changing the referral web page so that it no longer asks for secondary consent from service members. This page will only ask the New Enrollee for their spouse's contact information.

**Holiday Card:** A welcome to the Family Study holiday card will be sent to all responders.

**SRP Annual Meeting:** 15 April 2013 (Millennium Cohort EAB meeting: 16-17 April)

## FAMILY STUDY - WEEKLY MEETING AGENDA

### DECEMBER 18, 2012

#### MILCO STUDY TOTALS

P4 response rate: 18%

P4 referral rate: 33%

P4 Recent Contact: Emails were sent on Dec 11

P4 Upcoming Contact: Email reminder will be sent today

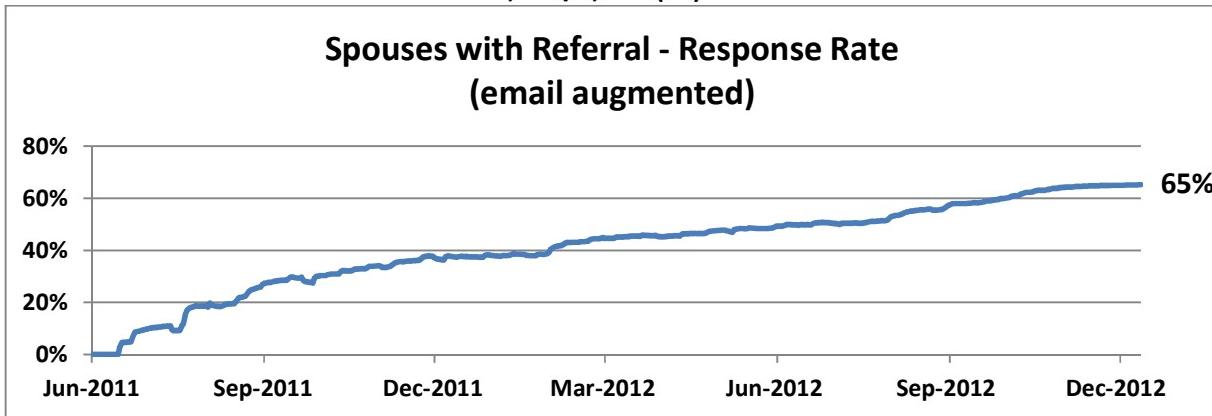


#### FAMILY STUDY TOTALS

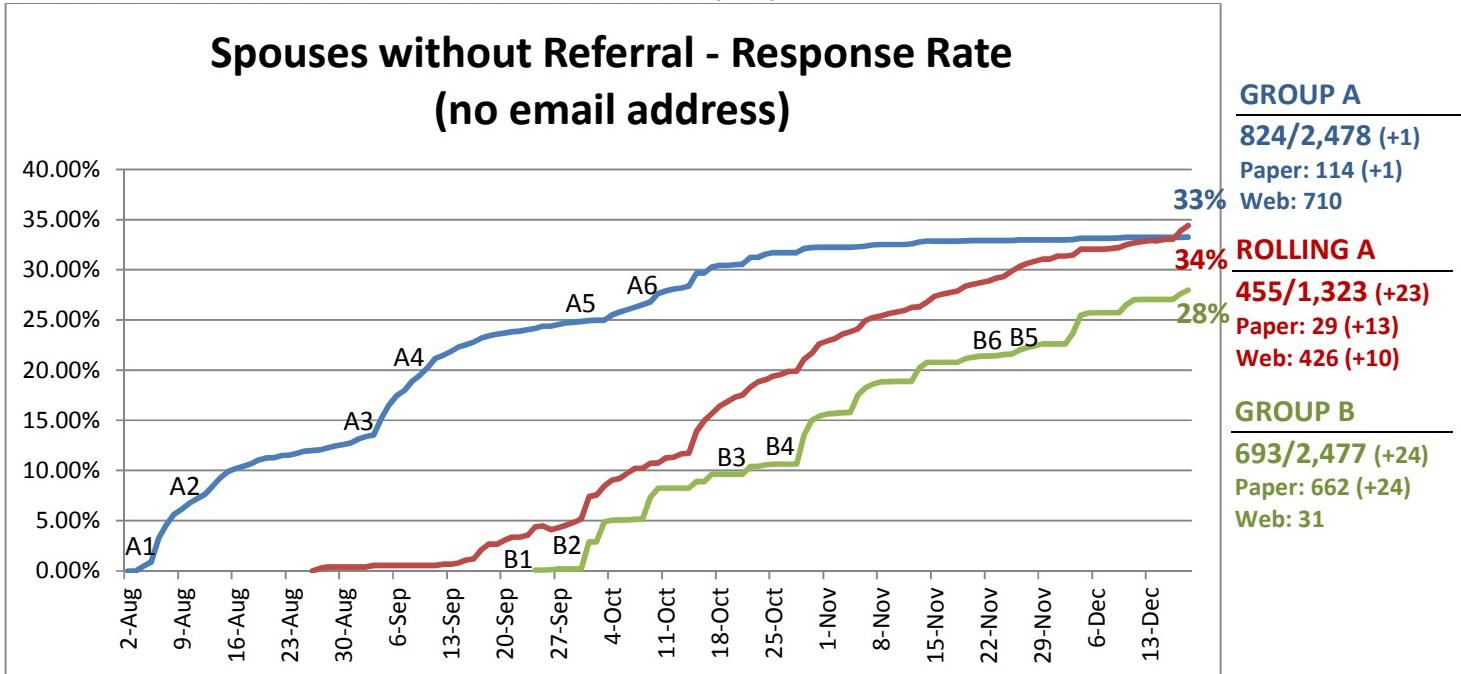
**FAMILY STUDY TOTAL COMPLETED: 6,946 (+ 54)**

**TOTAL RESPONSE RATE: 50%**

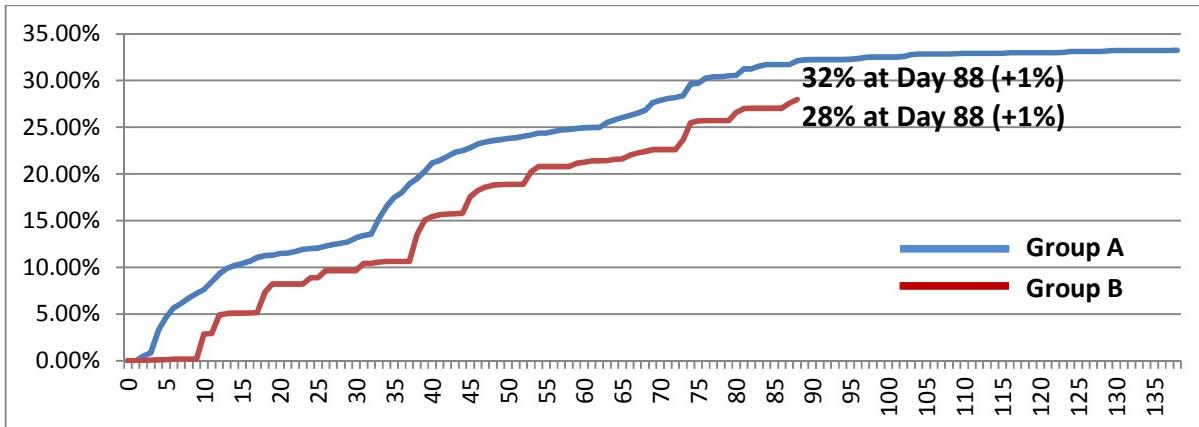
**WITH REFERRAL-TOTAL COMPLETED: 4,974/7,632 (+6)**



**WITHOUT REFERRAL-TOTAL COMPLETED: 1,972/6,278 (+48)**



## Overall Response Rate of Exp Group A vs Exp Group B at Day 88



## Experimental Groups

### Experimental Group A (N = 2,478):

- A1 Magnet Mailer mailed on 2 August
- A2 Postcard Reminder mailed on 9 August
- A3 Sample Survey with \$5 Starbucks card mailed on 30 August
- A4 Deanie Dempsey endorsement letter in card mailed on 6 September
- A5 Survey sent FedEx mailed on 2 October
  - PO Box addresses, foreign addresses and APO/FPOs sent USPS Priority Mail
- A6 Postcard Reminder mailed on 5 October

### Experimental Group B (N = 2,477):

- B1 Survey with Magnet mailed on 20 September
- B2 Postcard Reminder mailed on 27 September
- B3 Survey with \$5 Starbucks card mailed on 18 October
- B4 Deanie Dempsey endorsement letter in card mailed on 25 October
- B5 Survey sent FedEx mailed on 21 November
- B6 Postcard reminder mailed on 19 November

\* Holiday Mail Break: New group mailings will resume on 15 January.

## DISCUSSION TOPICS

**A6 Mailing:** We are moving forward with sending a survey instead of a postcard in January for the last mailing.

**Data Recognition Corporation:** We received an initial quote. After visiting their site and finalizing the plan for scanning and verifying, we are now waiting for a final quote.

**SRP New Member:** We received some feedback and we'll be inviting Cathy Flynn to join the SRP, but for now we won't be adding any additional members.

Dr. Cathy Flynn is a Senior Program Analyst with the Office of the Undersecretary of Defense (Military Community & Family Policy). Supporting research for Military Community and Family Policy (MC&FP) over the past seven years, Dr. Flynn has worked to bridge research needs and policy development. Her current portfolio includes leadership of the Military Family Life Project, a two-wave survey of military spouses and couples. Prior to coming to DoD, she was a Senior Research Associate at the Center for Families at Purdue University and research faculty in the Department of Psychology at Loyola University in Chicago. Dr. Flynn received her doctoral degree in Human Development & Social Policy from Northwestern University in 1999.

**SRP Annual Meeting:** 15 April 2013 (Millennium Cohort EAB meeting: 16-17 April)

**Next Family Meeting:** Tuesday, January 8<sup>th</sup> 2013

## FAMILY STUDY - WEEKLY MEETING AGENDA

### JANUARY 8, 2013

#### MILCO STUDY TOTALS

P4 response rate: 19%

P4 referral rate: 34%

P4 Recent Contact: Email (Dec 18)

P4 Upcoming Contact: Postcard reminder (Jan 17) and email reminder (Jan 22)

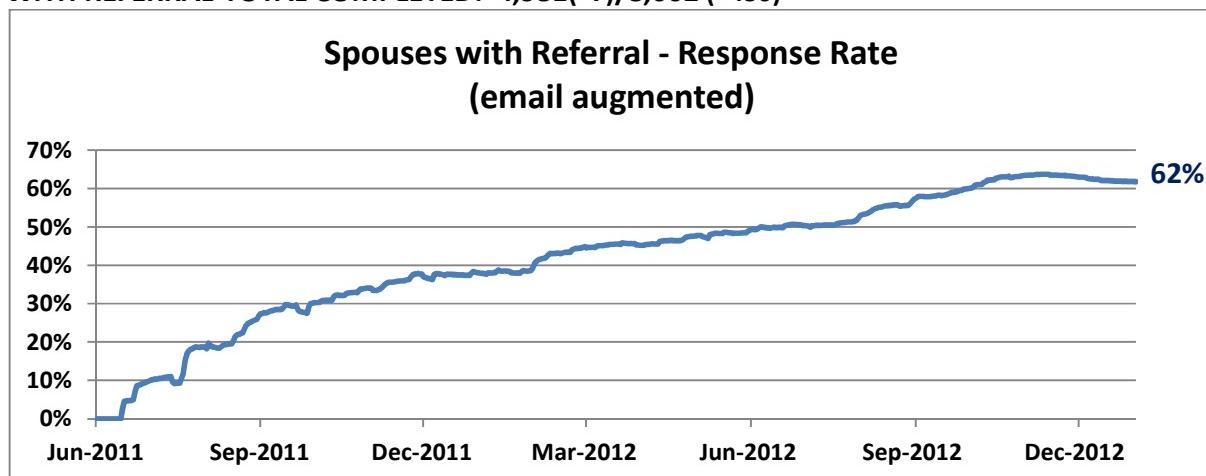


#### FAMILY STUDY TOTALS

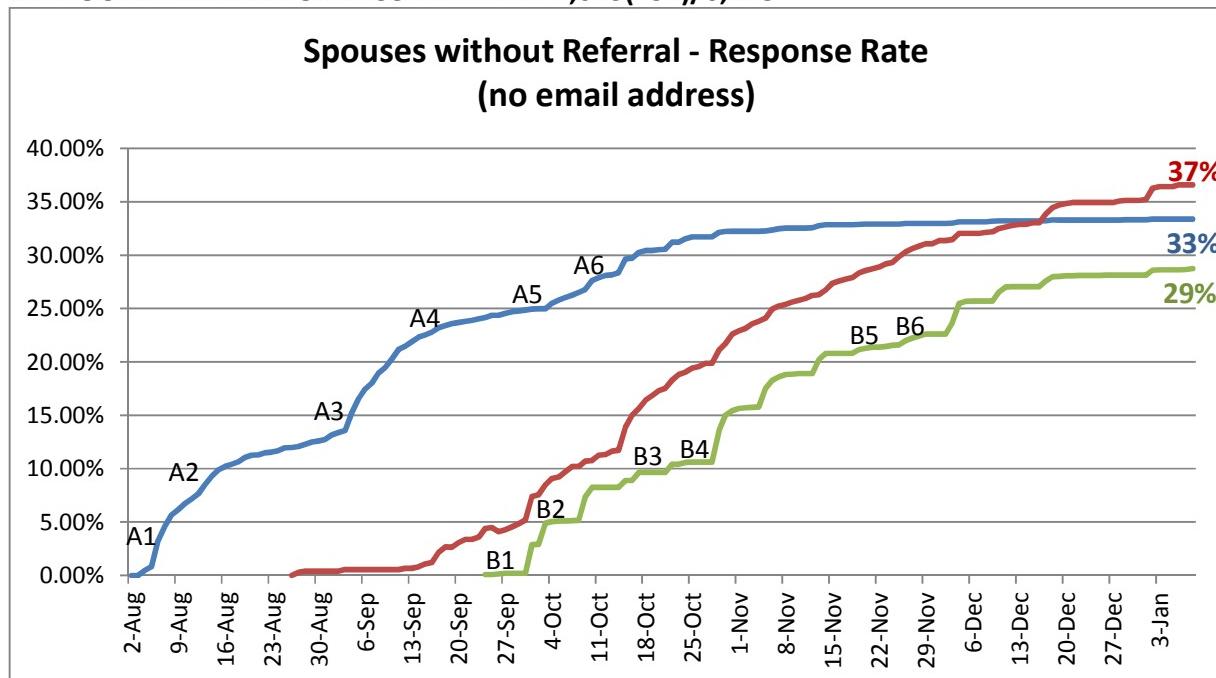
**FAMILY STUDY TOTAL COMPLETED: 7,004 (+ 58)**

**TOTAL RESPONSE RATE: 49% (-1%)**

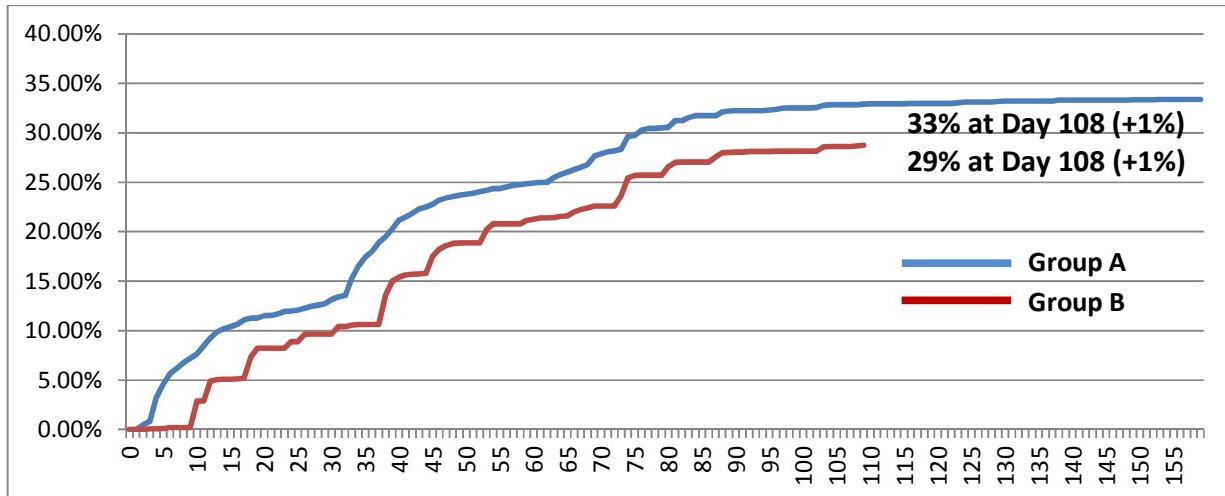
**WITH REFERRAL-TOTAL COMPLETED: 4,981(+7)/8,062 (+430)**



**WITHOUT REFERRAL-TOTAL COMPLETED: 2,023(+51)/6,278**



## Overall Response Rate of Exp Group A vs Exp Group B at Day 108



## Experimental Groups

### Experimental Group A (N = 2,478):

- A1 Magnet Mailer mailed on 2 August
- A2 Postcard Reminder mailed on 9 August
- A3 Sample Survey with \$5 Starbucks card mailed on 30 August
- A4 Deanie Dempsey endorsement letter in card mailed on 6 September
- A5 Survey sent FedEx mailed on 2 October
  - PO Box addresses, foreign addresses and APO/FPOs sent USPS Priority Mail
- A6 Postcard Reminder mailed on 5 October

### Experimental Group B (N = 2,477):

- B1 Survey with Magnet mailed on 20 September
- B2 Postcard Reminder mailed on 27 September
- B3 Survey with \$5 Starbucks card mailed on 18 October
- B4 Deanie Dempsey endorsement letter in card mailed on 25 October
- B5 Survey sent FedEx mailed on 21 November
- B6 Postcard reminder mailed on 19 November

## DISCUSSION TOPICS

**Reserve Group (N=4,954):** The reserve group mailings which we will now refer to as 'C' mailings will resume next Tuesday, January 15<sup>th</sup>. 6<sup>th</sup> mailing is a survey sent priority mail instead of a postcard as in the previous mailings.

**Data Recognition Corporation:** We received the final quote and are looking to move forward. We are working on setting up the contract.

**Family Referral Page:** Referral page on the Milco site has been approved by the IRB. This was implemented last Friday.

**Consent Email:** Participants who forgot to sign consent will receive an email today.

**Meeting Time:** Starting the week of January 21<sup>st</sup>, we'd like to see if we could move our weekly meetings to Wednesdays or Thursdays around 1 or 1:30pm PST. This could be temporary or permanent depending on the rest of the group.

**SRP Annual Meeting:** 15 April 2013 (Millennium Cohort EAB meeting: 16-17 April)

## FAMILY STUDY - WEEKLY MEETING AGENDA

### JANUARY 30, 2013



#### MILCO STUDY TOTALS

P4 response rate: 19%

P4 referral rate: Overall - 34%, New Process - 44%

#### FAMILY STUDY TOTALS

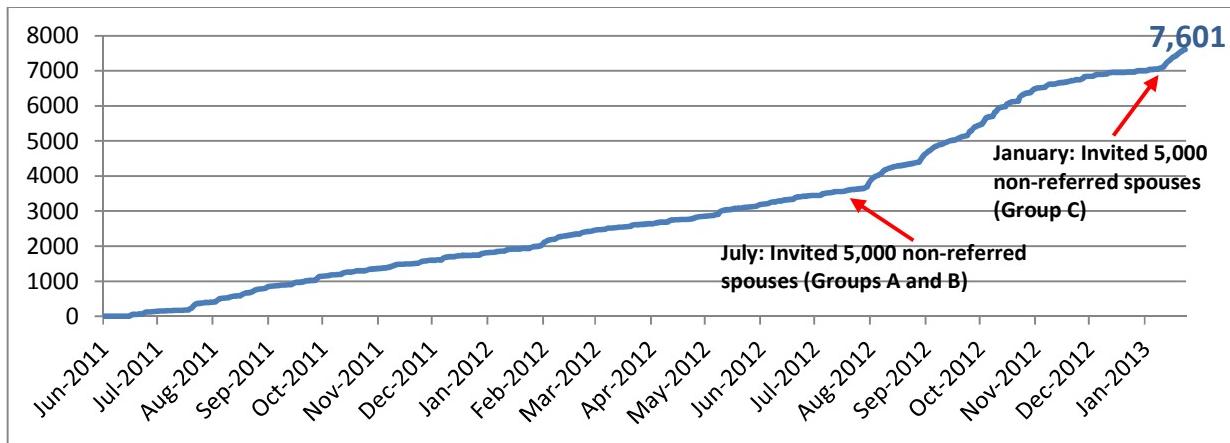
**FAMILY STUDY TOTAL COMPLETED: 7,601 (+ 226)**

**TOTAL RESPONSE RATE: 39%**

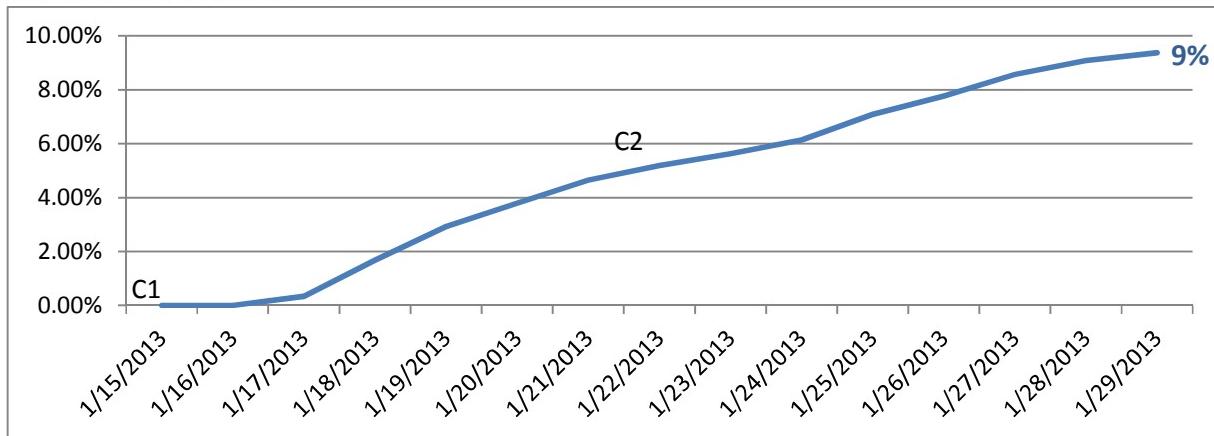
**WITH REFERRAL: 5,097(+17)**

**WITHOUT REFERRAL: 2,504(+209)**

#### **FAMILY STUDY TOTAL RESPONSES**



#### **GROUP C – RESPONSE RATES**



**GROUP C**  
**464/4,954 (+204)**  
 Paper: 0  
 Web: 464 (+204)

#### Reserve Group C (N = 4,954):

- C1 Survey with Magnet mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

## FAMILY STUDY - WEEKLY MEETING AGENDA

### FEBRUARY 27, 2013



#### MILCO STUDY TOTALS

P4 response rate: 20%  
P4 referral rate: 34%

#### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 8,554(+557)**  
**TOTAL RESPONSE RATE: 38%(+1%)**

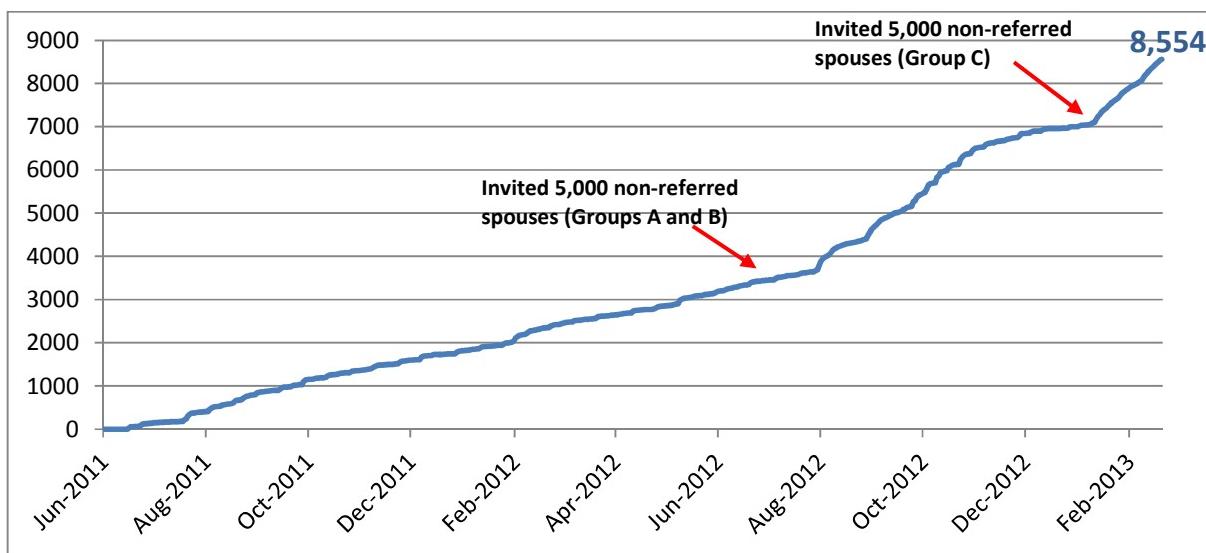
##### WITH REFERRAL:

-TOTAL: 5,989(+138)  
-RESPONSE RATE: 47%

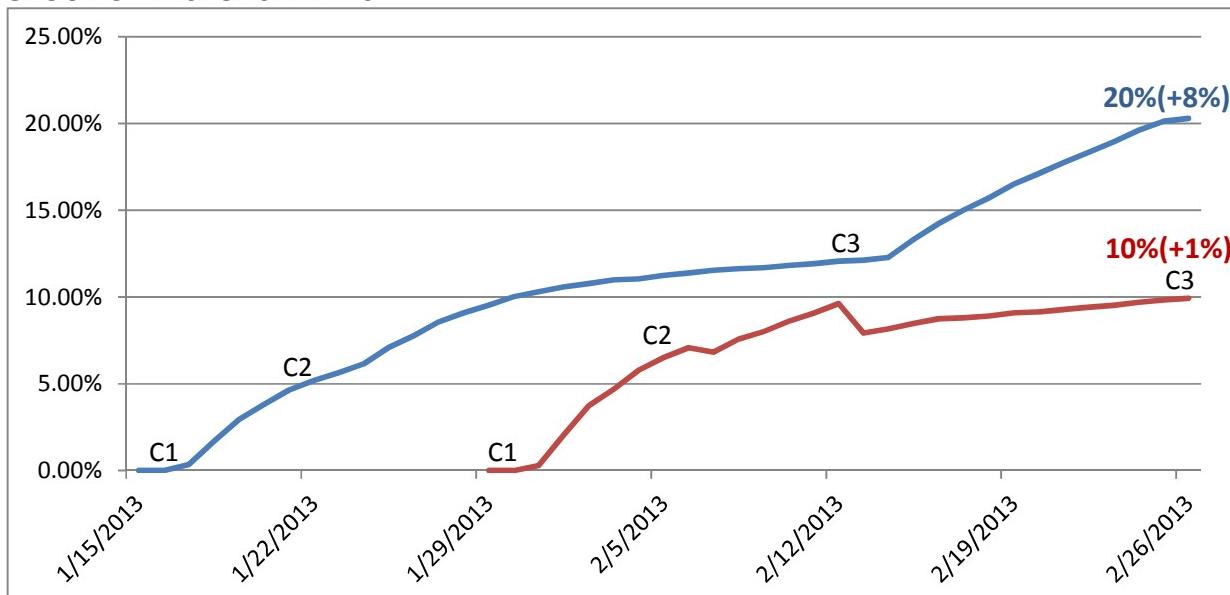
##### WITHOUT REFERRAL:

-TOTAL: 2,565(+419)  
-RESPONSE RATE: 26%(+4%)

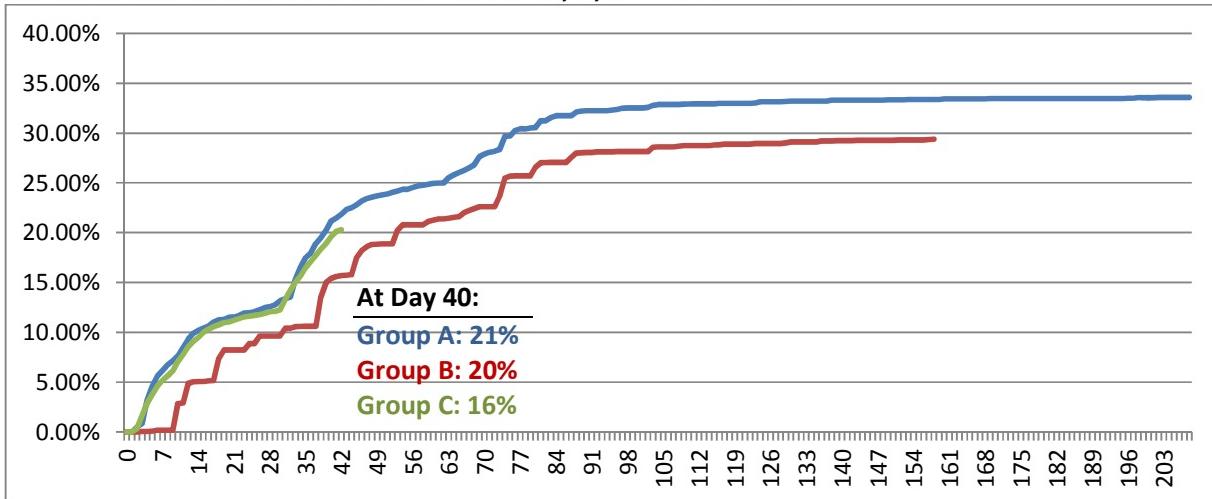
#### **FAMILY STUDY TOTAL RESPONSES**



#### **GROUP C – RESPONSE RATES**



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N =4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### DISCUSSION TOPICS

- **Milco partial completers:** Identified Milco partial completers based on where they fell off on the survey (N=1,074). Of these, 539 were married and had a DEERS record match, making them eligible for direct spouse contact.
- **SRP Annual Meeting:** 15 April 2013 (Millennium Cohort EAB meeting: 16-17 April).

## FAMILY STUDY - WEEKLY MEETING AGENDA

### MARCH 27, 2013



#### MILCO STUDY TOTALS

P4 response rate: 20%

#### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 9,273(+160)**

**TOTAL RESPONSE RATE: 41% (+1%)**

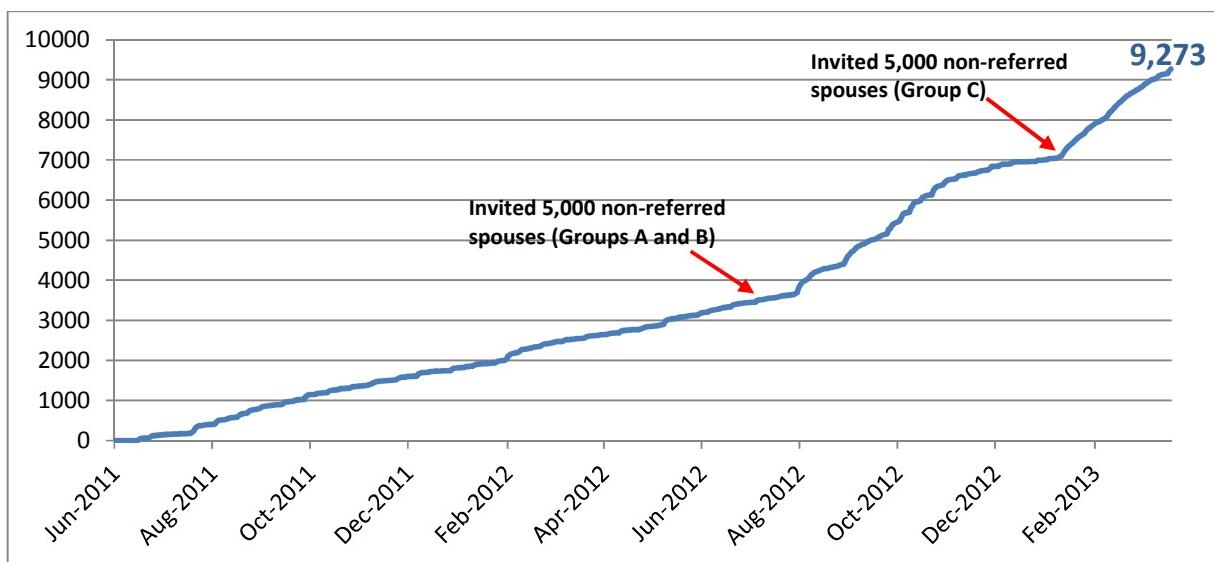
##### WITH REFERRAL:

- TOTAL: 5,331 (+11)
- RESPONSE RATE: 64%

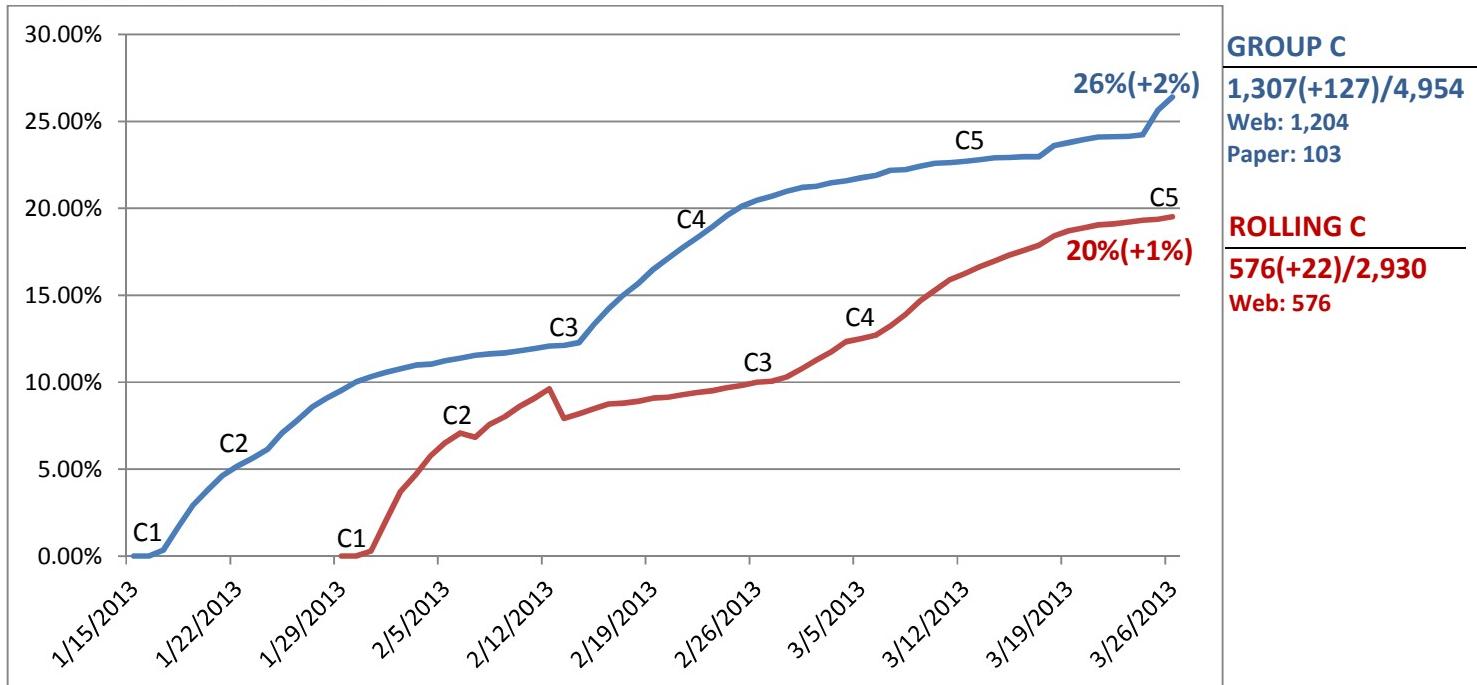
##### WITHOUT REFERRAL:

- TOTAL: 3,942(+149)
- RESPONSE RATE: 28%(+1%)

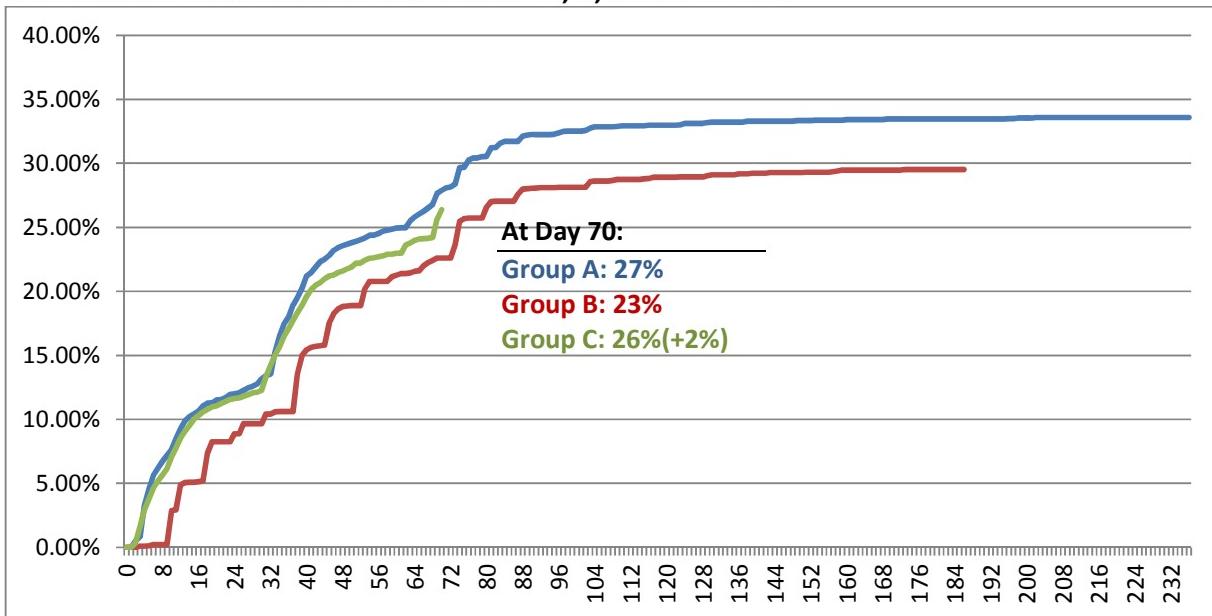
#### FAMILY STUDY TOTAL RESPONSES



#### GROUP C – RESPONSE RATES



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N =4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### DISCUSSION TOPICS

- SRP Annual Meeting: In person, 15 April 2013 (Millennium Cohort EAB meeting: 16 April).

## FAMILY STUDY - WEEKLY MEETING AGENDA APRIL 24, 2013



### MILCO STUDY TOTALS

P4 response rate: 20%

### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 9,761(+199)**

**TOTAL RESPONSE RATE: 43% (+1%)**

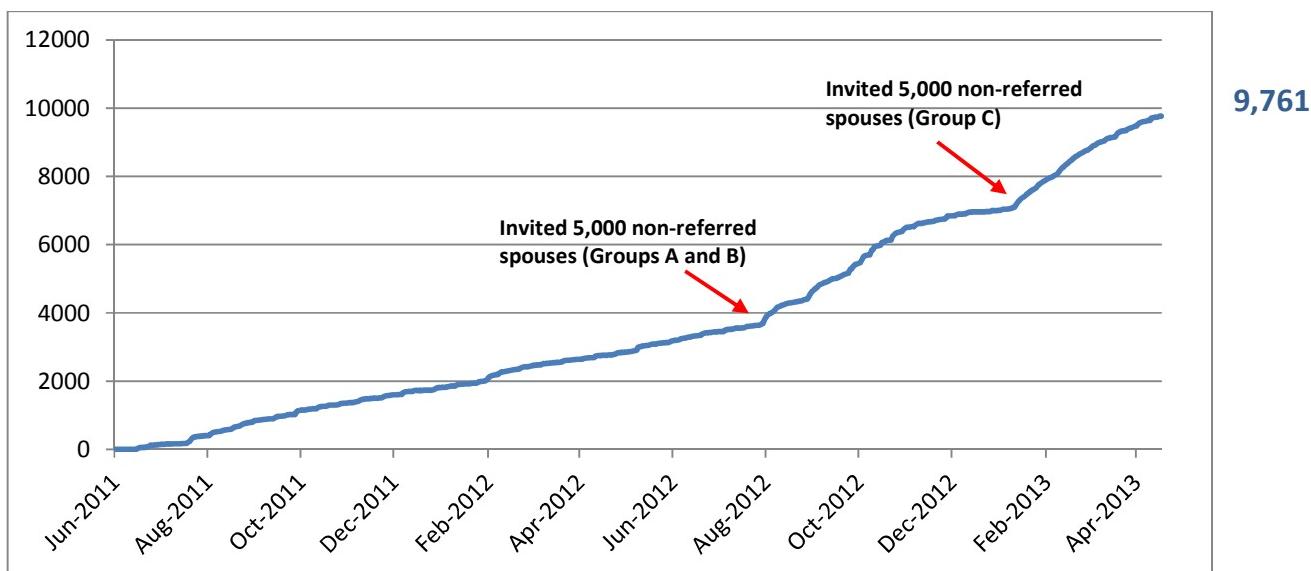
#### WITH REFERRAL:

- TOTAL: 5,402 (+30)
- RESPONSE RATE: 65% (+1%)

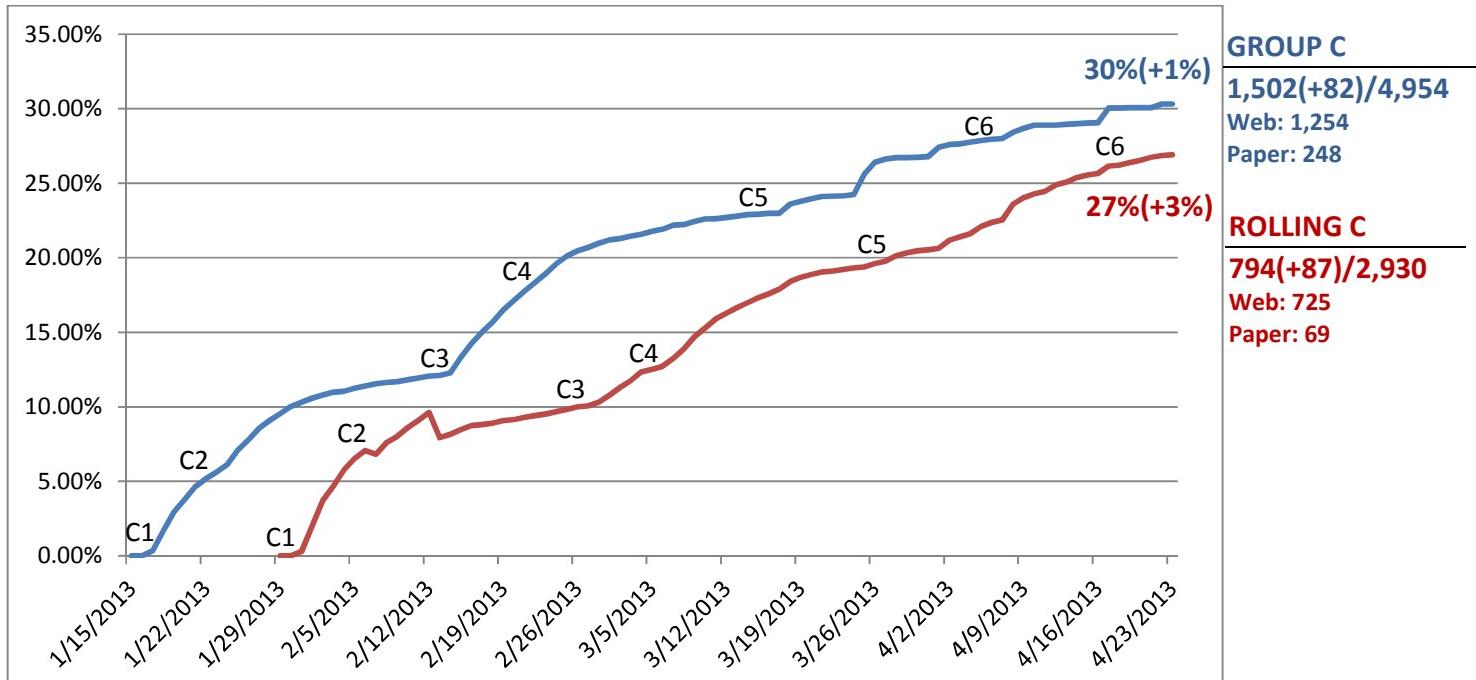
#### WITHOUT REFERRAL:

- TOTAL: 4,358(+168)
- RESPONSE RATE: 31% (+1%)

### FAMILY STUDY TOTAL RESPONSES



### GROUP C – RESPONSE RATES



## FAMILY STUDY - WEEKLY MEETING AGENDA

May 29, 2013



### MILCO STUDY TOTALS

P4 response rate: 20%

### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 10,006 (+29)**

**TOTAL RESPONSE RATE: 44%**

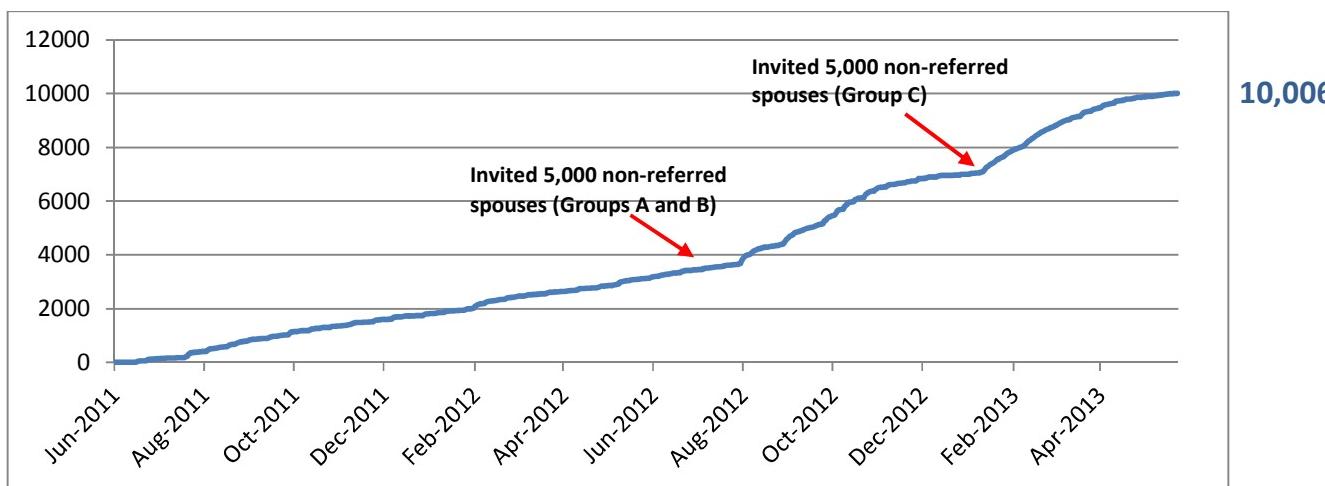
#### WITH REFERRAL:

- TOTAL: 5,453 (+9)
- RESPONSE RATE: 65%

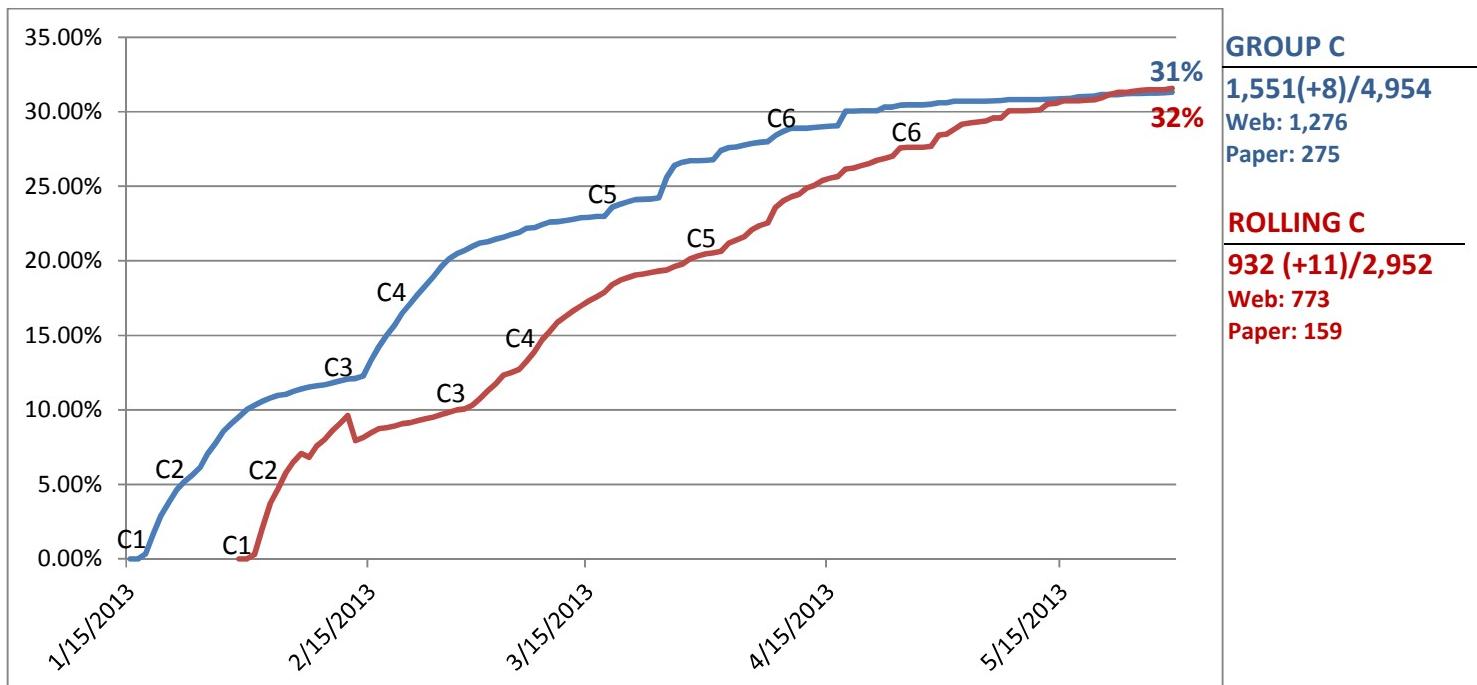
#### WITHOUT REFERRAL:

- TOTAL: 4,553 (+20)
- RESPONSE RATE: 32%

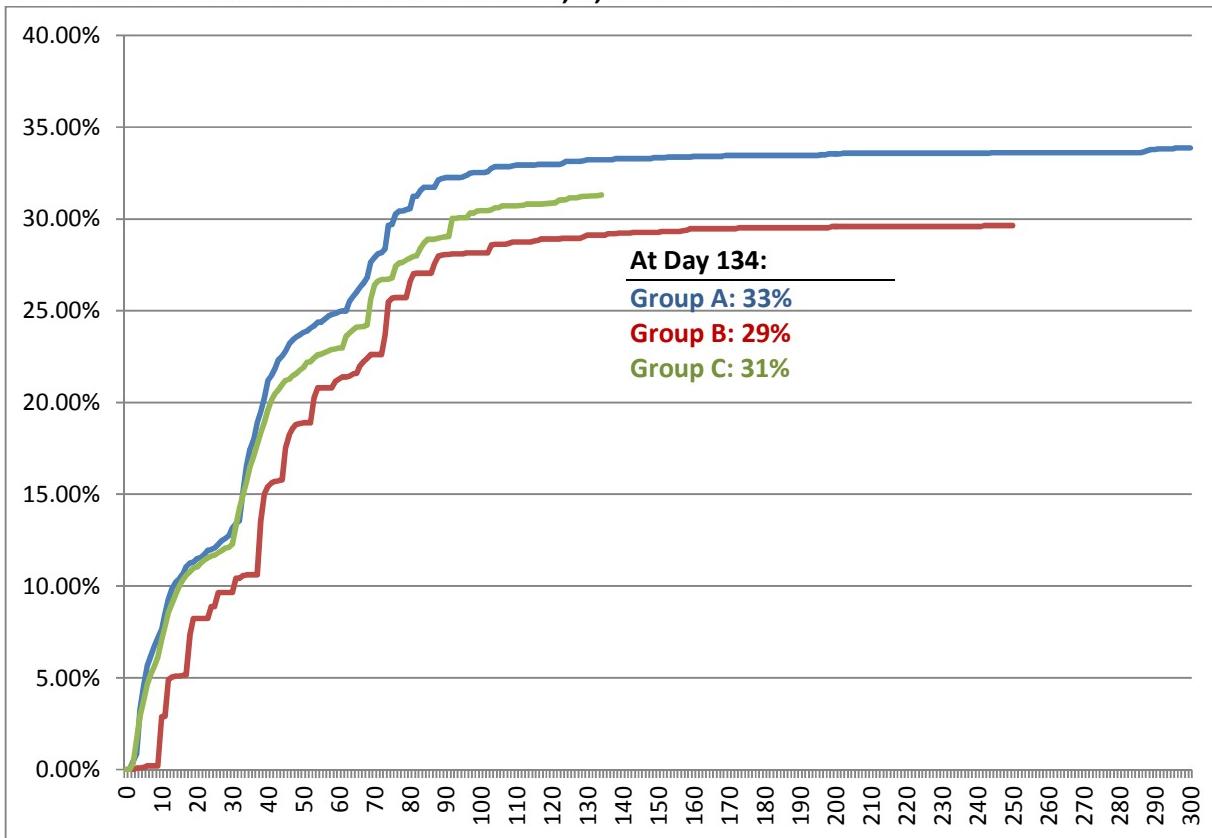
### FAMILY STUDY TOTAL RESPONSES



### GROUP C – RESPONSE RATES



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



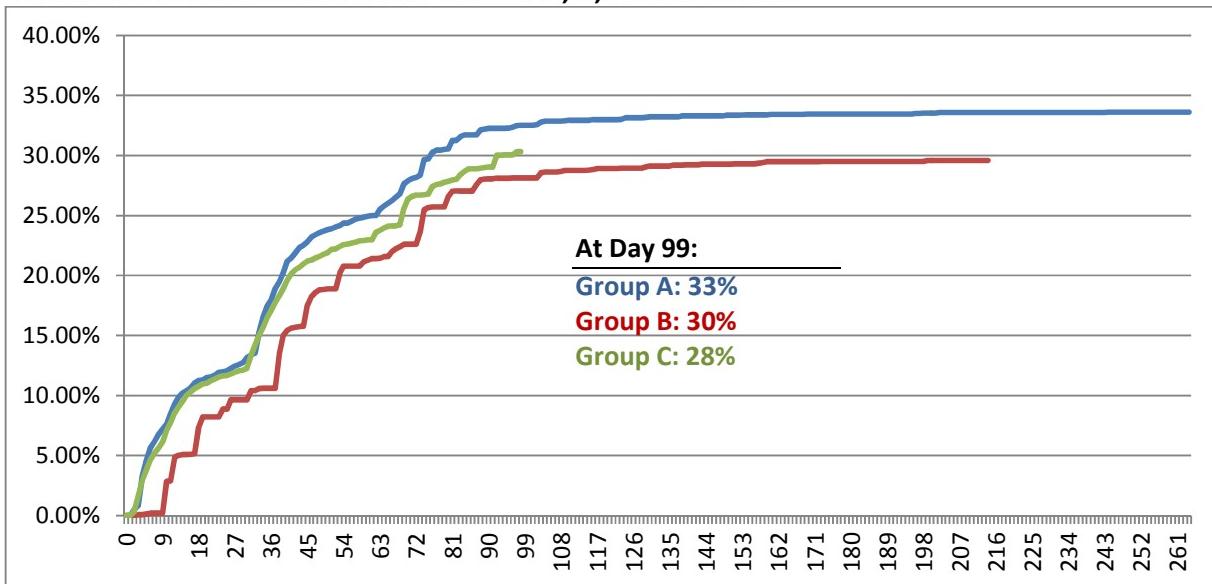
### Reserve Group C (N = 4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### ITEMS FOR DISCUSSION:

1. 2014 Survey questions to remove/keep
2. Missing Data
3. Open text comments
4. Recommendations from SRP
5. Cognitive interviews
6. Participant communications for 2014 cycle

## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N = 4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### DISCUSSION TOPICS

- **SRP Annual Meeting:** Thank you to everyone. Your contributions, time, and effort are appreciated. We received input and recommendations, and the meeting notes are being composed and will be distributed in the near future.

## FAMILY STUDY - WEEKLY MEETING AGENDA

June 19, 2013



### MILCO STUDY TOTALS

P4 response rate: 20%

### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 10,040 (+8)**

**TOTAL RESPONSE RATE: 44%**

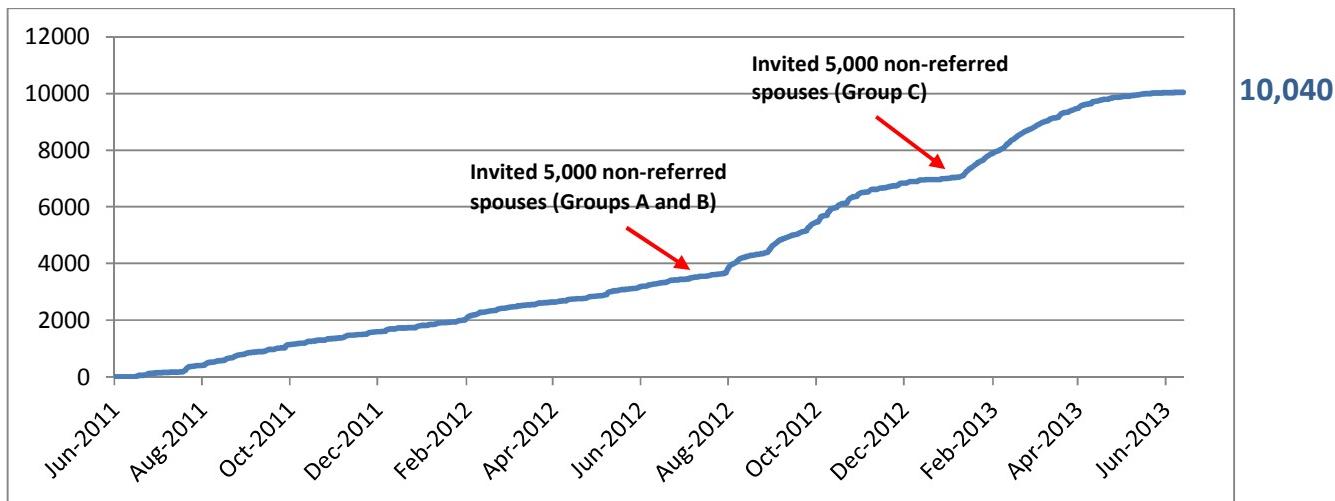
#### WITH REFERRAL:

- TOTAL: 5,466
- RESPONSE RATE: 65%

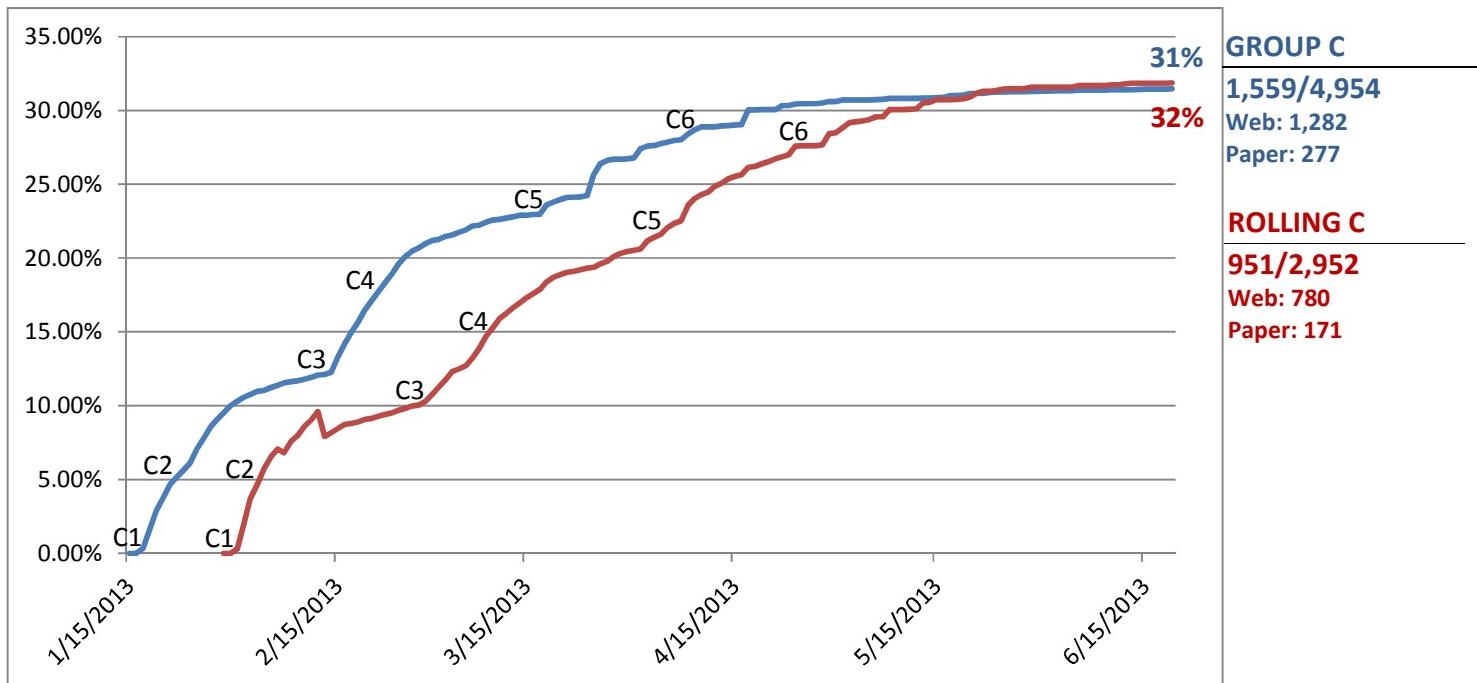
#### WITHOUT REFERRAL:

- TOTAL: 4,574
- RESPONSE RATE: 32%

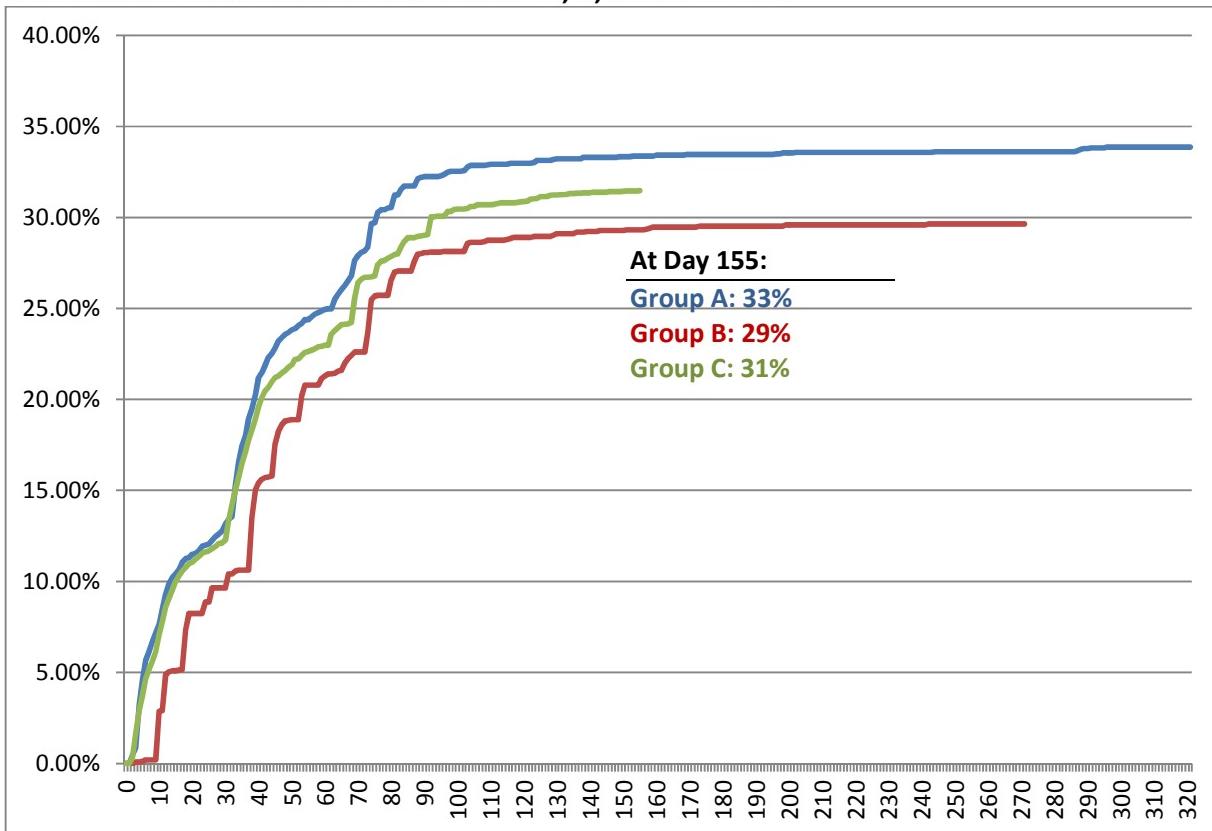
### FAMILY STUDY TOTAL RESPONSES



### GROUP C – RESPONSE RATES



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N = 4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### Items for Discussion

-Changes to the 2014 Survey

- Married/Divorced/Separated/Widowed sections
- Family/Children section

## FAMILY STUDY - WEEKLY MEETING AGENDA

### July 31, 2013



#### MILCO STUDY TOTALS

P4 response rate: 20%

#### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 10,065 (+2)**

**TOTAL RESPONSE RATE: 45%**

##### WITH REFERRAL:

-TOTAL: 5,469

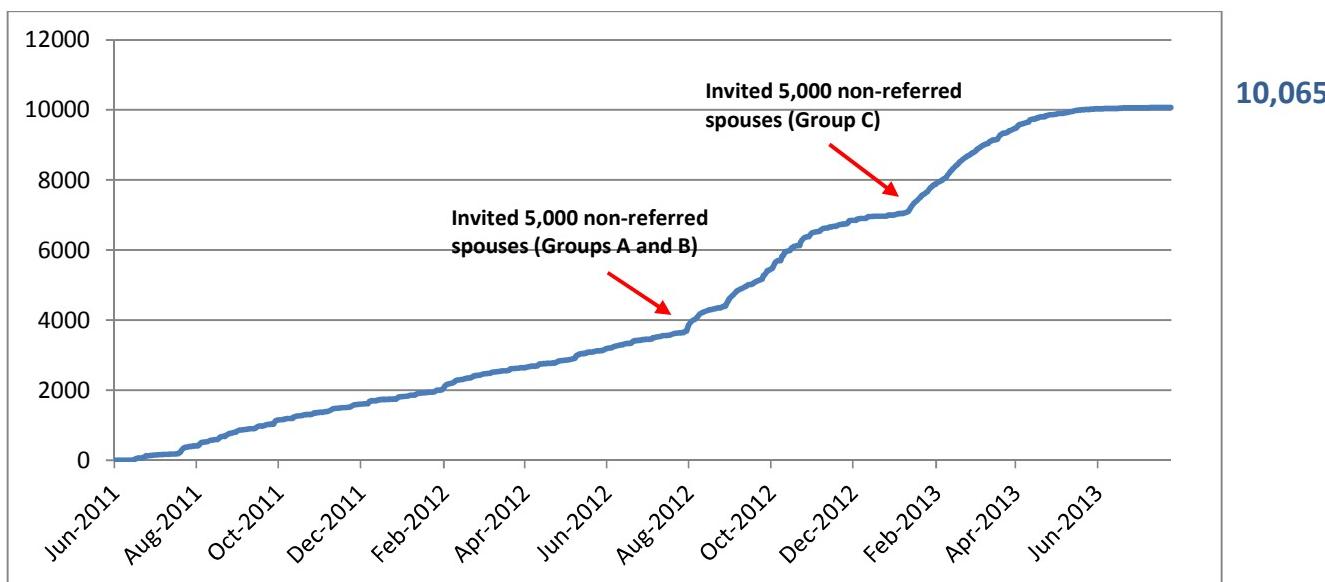
-RESPONSE RATE: 65%

##### WITHOUT REFERRAL:

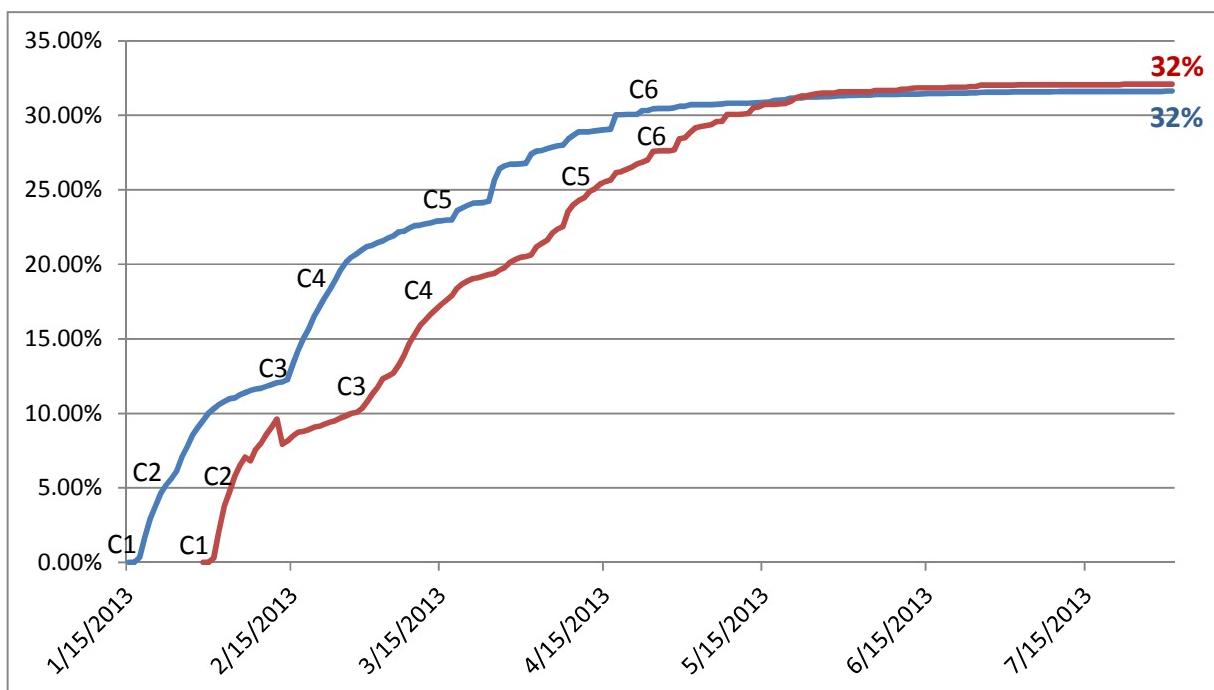
-TOTAL: 4,596

-RESPONSE RATE: 32%

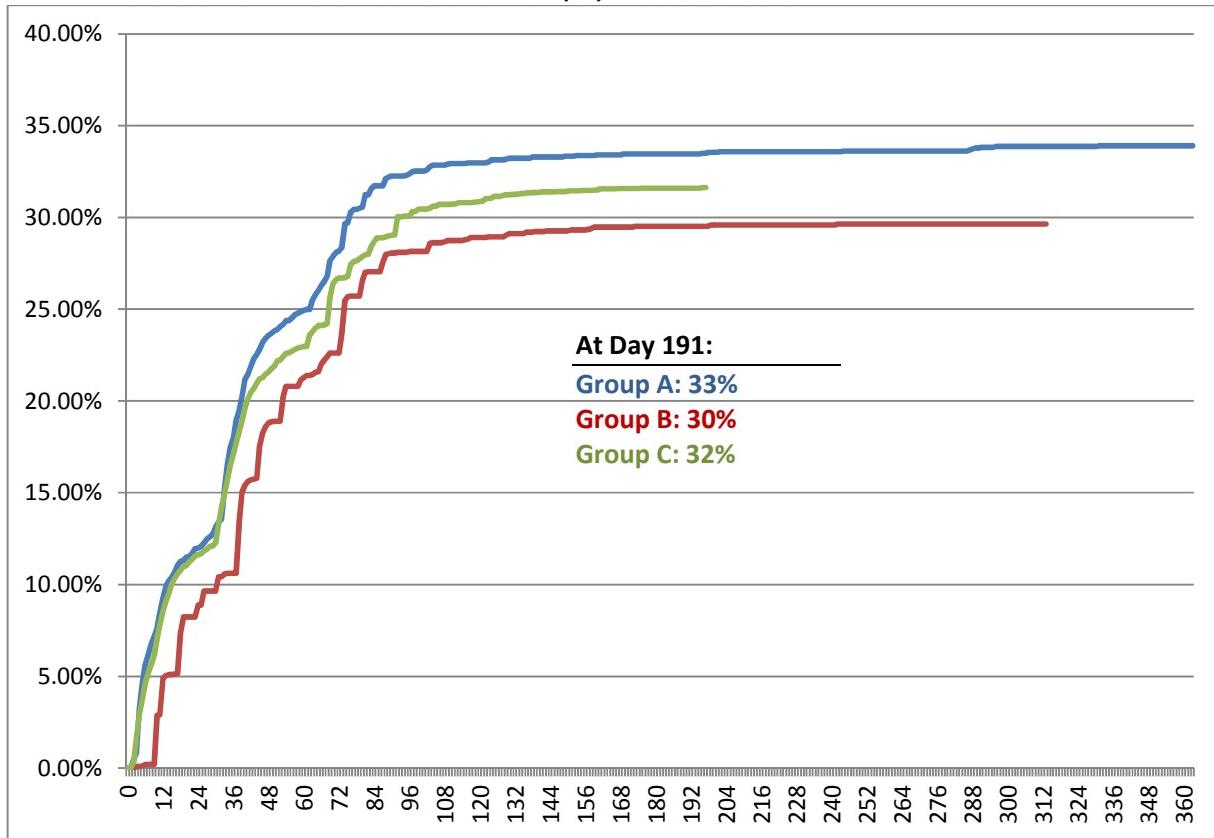
#### FAMILY STUDY TOTAL RESPONSES



#### GROUP C – RESPONSE RATES



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N = 4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### Items for Discussion

1. Missing consents (N=90)

## FAMILY STUDY - WEEKLY MEETING AGENDA

### August 21, 2013



#### MILCO STUDY TOTALS

P4 response rate: 20%

#### FAMILY STUDY TOTALS

**FAMILY STUDY TOTAL COMPLETED: 10,065**

**TOTAL RESPONSE RATE: 45%**

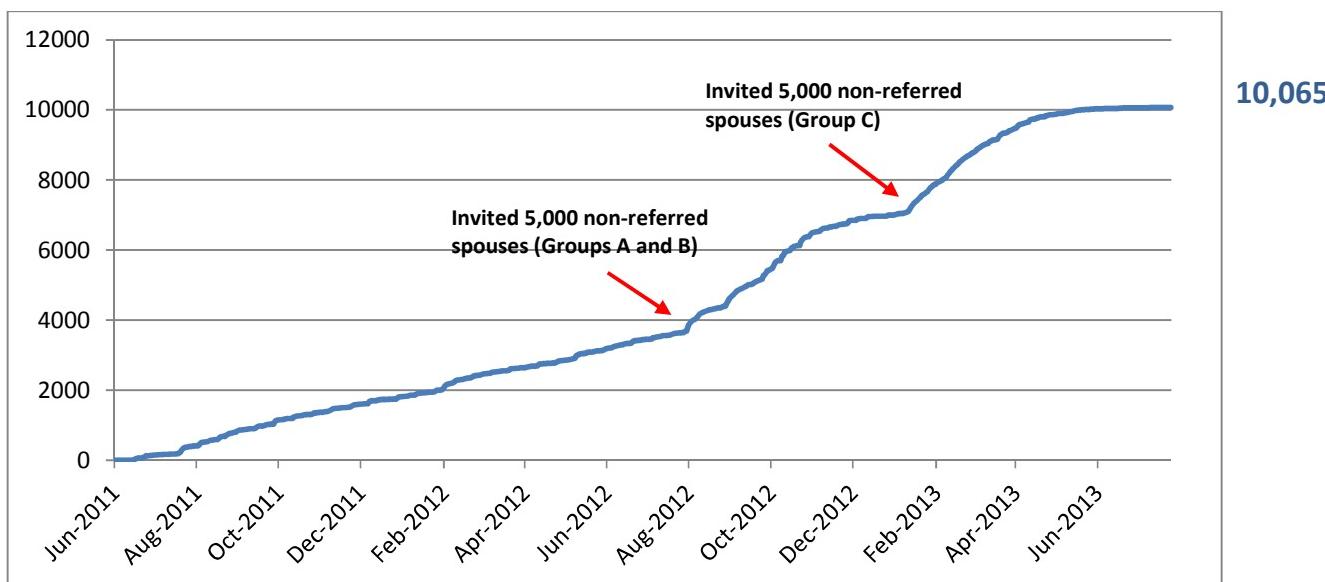
##### WITH REFERRAL:

- TOTAL: 5,469
- RESPONSE RATE: 65%

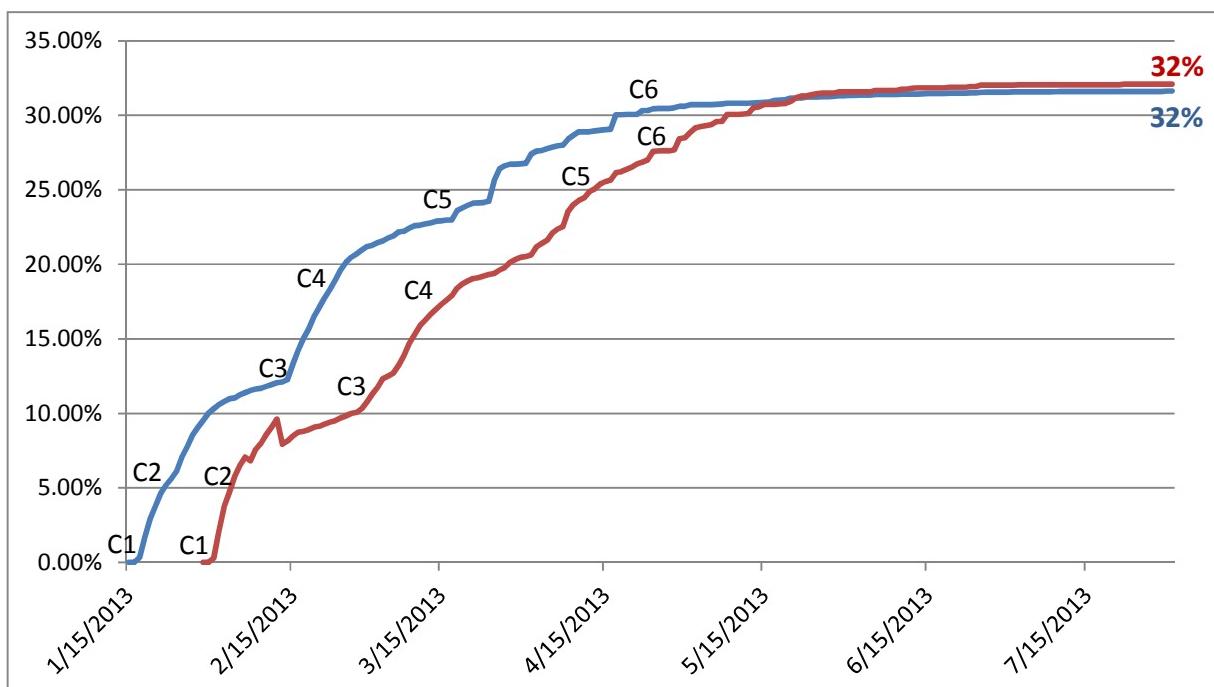
##### WITHOUT REFERRAL:

- TOTAL: 4,596
- RESPONSE RATE: 32%

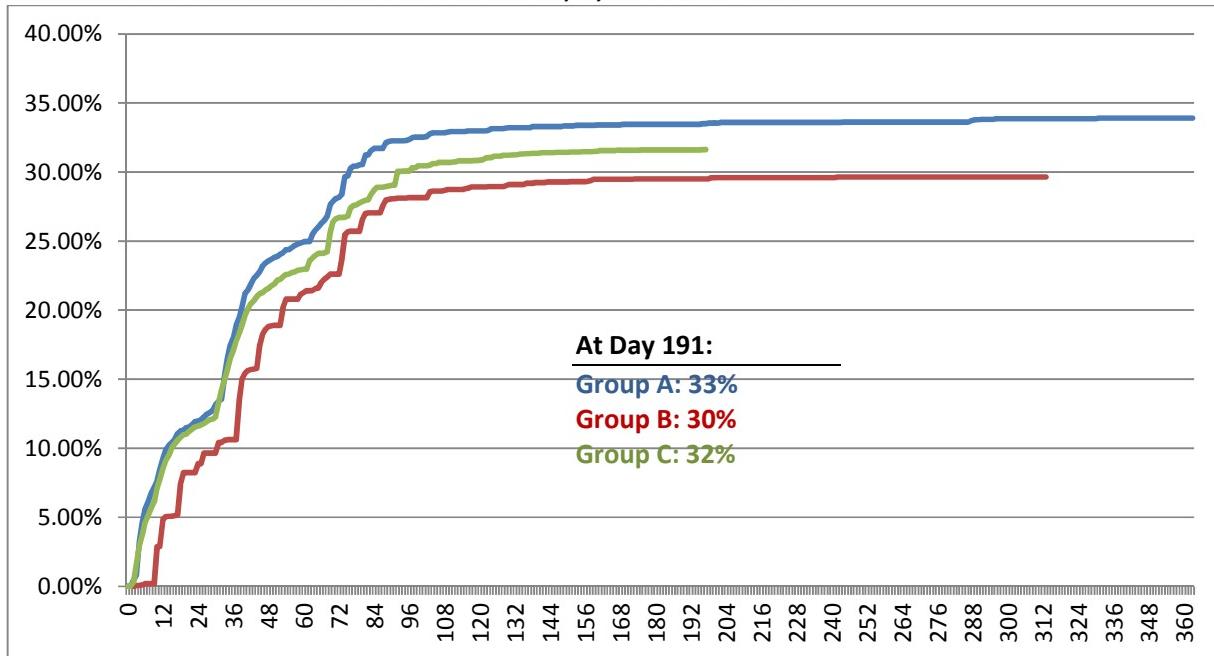
#### FAMILY STUDY TOTAL RESPONSES



#### GROUP C – RESPONSE RATES



## OVERALL RESPONSE RATE OF EXP GROUP A, B, AND C BY DAY



### Reserve Group C (N =4,954):

- C1 Magnet Mailer mailed on 15 January
- C2 Postcard Reminder to be mailed on 22 January
- C3 Sample Survey with \$5 Starbucks card to be mailed on 12 February
- C4 Deanie Dempsey endorsement letter in card to be mailed on February 19
- C5 Survey sent FedEx to be mailed on 12 March
- C6 Survey sent Priority mail to be mailed on 2 April

### Items for Discussion

1. Spouse's Job Questions – Do we make these questions specific to civilian/military jobs?  
(Questions Q73, Q74, Q75, A6, B9)
2. Preparations for Cognitive Interviews
3. 2014 Survey - Usability Testing Feedback

**FAMILY STUDY - WEEKLY MEETING AGENDA**  
**September 18, 2013**

**MILCO STUDY TOTALS**

P4 response rate: 20%

**FAMILY STUDY TOTALS**

**FAMILY STUDY TOTAL COMPLETED: 10,065**

**TOTAL RESPONSE RATE: 45%**

**WITH REFERRAL:**

- TOTAL: 5,469
- RESPONSE RATE: 65%

**WITHOUT REFERRAL:**

- TOTAL: 4,596
- RESPONSE RATE: 32%



**Item for Discussion**

**1. Missing Consent Calls: Match these or leave them unmatched?**

- a. 6 individuals Steven's dataset has no name for but I have a match on gender, date of birth, and sponsor ssn.
- b. 1 individual agreement on gender, date of birth, and sponsor ssn but different last names (re-married?)
- c. 1 individual agreement on gender, date of birth, and sponsor ssn but different first names.
- d. 2 with match on name, sponsor ssn , gender, but not date of birth. one is 2 days off the other 42 days off.

**2. Data**

- a. Validation
- b. Web entry
- c. Cleaning code

**3. 2014 Survey**

**4. Healthcare question vs Health Coverage/Insurance question**

Current Questions on the 2014 Family Survey:

**Q17. In the past 3 years, where have you gone for medical care? Mark all that apply.**

- Military Treatment Facility (MTF)
- VA facility
- Civilian Provider - TRICARE
- Civilian Provider – private insurance, Medicaid, or Medicare
- Public health centers (free or reduced cost care)
- I do not use healthcare facilities/providers

**Q103. In the past 3 years, where has your child(ren) 17 or younger, gone for care? Mark all that apply.**

- Military Treatment Facility (MTF)
- Civilian Provider - TRICARE
- Civilian Provider - private insurance, Medicaid, or SCHIP (State Children's Health Insurance Program)
- Public health centers (free or reduced cost care)
- My child(ren) do not use healthcare facilities/providers

Question on the 2014 Millennium Cohort Survey:

**Q17. What kind of health coverage or insurance do you currently have? (Check all that apply)**

- No health coverage or insurance
- School health insurance plan
- TRICARE or military health insurance plan
- Employer health insurance plan (self, spouse/partner, parent, or other family member)
- Medicare
- Medicaid
- VA health care (Department of Veterans Affairs/Veterans Health Administration)